THE
MONTHLY REVIEW,
For AUGUST, 1806.

ART. I. *European Commerce,* shewing new and secure Channels of Trade with the Continent of Europe: detailing the Produce, Manufactures, and Commerce, of Russia, Prussia, Sweden, Denmark, and Germany; as well as the Trade of the Rivers Elbe, Weser, and Ems; with a general View of the Trade, Navigation, Produce, and Manufactures, of the United Kingdom of Great Britain and Ireland; and its unexplored and improvable Resources and interior Wealth. Illustrated with a Canal and River Map of Europe. By J. Jepson Oddy, Member of the Russia and Turkey or Levant Companies. 4to. pp. 651. 2l. 12s. 6d. Boards. Richardsons, &c. 1805.

THAT all civilized states have mutually an interest in each other's prosperity, however incredulous on this subject statesmen may be, and always have been, is one of the clearest doctrines which modern researches into the principles of political economy have established; and not less indubitable is it, that the benefit which any country derives from the flourishing situation of adjoining nations is in proportion to the advances which it has made in arts, manufactures, and commerce. On these grounds, it is apparent that Great Britain must be the well-wisher of neighbouring states; since they cannot increase their produce and their industry, nor add to their population, without the supply of those articles in which she stands in need growing more abundant, and the demand for those which she furnishes becoming more general. The interests in this case are reciprocal; and if it promotes the welfare of Britain to have the adjoining communities advance in real and genuine prosperity, they have a similar reason for desiring that she should continue to be the wealthy and prosperous state which she has long been.

It is hinted in the volume now before us, it has been elsewhere shewn at large, and the position still admits of additional elucidation, that the commerce and industry of Great Britain, while they elevate her own strength and power, have a very important beneficial influence over the rest of the world.

Mr. Oddy exemplifies this position in the case of Russia and the Northern States; and the reader will perceive that what is here laid down, is capable of being still farther generalized;

'In order that we may be able to judge from facts, whether the nations of the north had any occasion to complain of England hurting and interrupting their trade, let us look at the amount of imports; comparing two years of last war with two years during the peace, and we shall see that the increase, comparing 1784 and 1785, with 1801 and 1802, is nearly thus:

'Imports from Russia have increased from 450,000*l* to 2,230,000*l*. that is, they are four times greater than they were; those of Denmark have nearly doubled, and those of Sweden have done the same; and if those two latter powers have not increased still more, it is owing to themselves: we cannot purchase what they have not got to sell; and, if they do not increase their produce more rapidly, their commerce must feel the effects.

'It may be hoped, that a convention being entered into, and the improbability of Russia ever being so unfortunately guided as she was in 1800, will prevent any future discussions on this subject, which, as we have seen, originated rather in private motives than in justice: still, however, as there is a possibility that what has happened may happen again, it may not be improper to inquire into the consequences of such hostilities.

'The chief trade of Russia, Denmark, and Sweden, is with England; that would, in the first place, be interrupted; and England, during that interruption, would find it necessary either to raise at home, or procure from America, the articles now obtained from those nations. This we shall see, is perfectly practicable, and the trade never would return to its present state. The northern nations would then be great losers, independent of the expenses of the war, which, at all events, would be considerable; and the object for which they fought would be destroyed, whether they succeeded or failed. Let us suppose, for a moment, that England was compelled to yield, where would then be the commerce of Russia? Is it not the naval power and greatness of England that occasions the chief consumption of naval stories in every country? Would the materials for a few frigates, such as are maintained by the states of America, support the commerce of the northern nations? and if England were destroyed, where would be the necessity for any thing more?

'If, on the contrary, England conquered, the destruction of the rising navy of Russia would be certain; Denmark and Sweden would sustain a loss that twenty years of commerce would not repair, particularly of such mutilated commerce as they would then enjoy.'

We very much applaud the observations of this author on the temperate conduct which he advises England to pursue. A sense of her own dignity, and the circumstances of the times, prescribe it to her not only to avoid all harsh and vexatious proceedings, but to endeavour by a forbearing and becoming deportment to allay the envy and jealousy with which she is regarded.

regarded. Britain is intitled to the confidence of the continent. Her position, and the moderate extent of her territory, render it her invariable interest to prevent, as far as she is able, the aggrandizement of any one member of what has been called the European commonwealth, and to preserve the system of a balance,—that system which has so wonderfully advanced society in these western parts. The physical situation of these islands, and the pursuits and habits of their inhabitants, conspire to make it the interest of this government and people to take the side of justice in the quarrels of the continent. We cordially concur in the observations which the author makes on the importance of propagating these truths; and it would be incalculably for our own benefit, and for that of other nations, if they were universally known, felt, and operative.

Mr. Oddy remarks that, in a commercial view, the South of Europe is at this moment very much the same with regard to us as if it did not exist. In this situation, 'it is natural,' he says, 'to inquire how far the inconveniencies which this change has occasioned, may be remedied by paying proper attention to those inlets of commerce, which the countries of the North still furnish;' and to this inquiry the volume before us is dedicated. In the course of it, we meet with satisfactory proofs of the experience at home and abroad, the extensive knowlege, and the exemplary industry of its author. The information which he communicates is extremely comprehensive, while it descends to matters of the minutest detail; since all that relates to the produce, the traffic, the coin, the exchanges, the commercial policy, the improvements, and the resources of the several countries under consideration, is here treated more or less fully. Under some of these heads, the particulars are ample and satisfactory; and though in others they are desultory and scanty, yet whatever seems to have a claim on the attention of the British merchant engages the particular notice of the writer.

The work is introduced by a chapter containing a sketch of the history of European commerce from the earliest times. As this was a task foreign from the pursuits of the author, it was by no means necessary in his undertaking; and we are sorry to add that it is ill digested, and in many particulars incorrect.

At the head of the countries introduced into this discussion, stands Russia. 'If (says Mr. Oddy) this vast empire was to attain to the lowest population which prevails in the European states, namely to that of fifty to a square mile, it would count inhabitants to the number of one hundred and twenty-five millions, a change which would most materially affect the mercantile and political interests of this quarter of the globe.'

He makes its actual population amount to forty-two millions: but its revenue does not exceed ten millions; which sum, however, it is said, will go three times as far in that country as in England.

As prefatory to his account of this colossal power, the author states its extent and boundaries:

'In treating of the commerce of Russia, we shall divide it under the following heads:—1st. That of the White Sea—2d. Of the Baltic Sea.—3d. Of the Black Sea:—followed with general remarks, and a view of the whole: but there ought first to be given some outlines of the extent of the empire.

'Russia contains near the seventh part of the continent, and almost a twenty-sixth part of the whole globe. The extent from West to East, viz. from 39^{1} to 207$\frac{1}{4}$ degrees of longitude, contains 168 degrees; and if the islands of the Eastern Ocean be included, it will then contain 185.

'This great empire is divided into three divisions; from the 57th degree towards the North Pole forms the northern division; between the 57th and the 50th degree of latitude forms the middle division; and the southern division begins at the 50th degree of latitude, and extends to the southern boundary of the Russian dominions.

'The northern division abounds with all sorts of fish, some cattle, wild animals, and some of the metals, and much wood, though the latter diminishes in size, as it approaches the north.

'The middle division is not only preferable, from its being a more temperate climate, but because it furnishes the greatest part of the produce for the export of Russia, as well as for its manufactures. In this division grow the hemp and flax, as well as different sorts of grain; the cattle are here generally fatter: tallow, hides, and glue are produced here in greater quantities than in the northern parts: iron, copper, silver, and gold, and by far the finest fir timber come from hence.

'The south division is more productive in cattle than the middle division, but not equally so in other articles, though from its climate it may be made to produce fruits, wines, and most of the luxuries of life.

'European Russia is bounded on the east by Astracan, Kasan, and Siberia; on the north by the Arctic Sea; on the west by Sweden, the Baltic Sea, and Prussia, and Turkey in Europe; on the south, by the Black Sea, and part of Persia.

'Asiatic Russia is bounded on the north by the Arctic Sea; on the west by Europe; on the south by part of Persia, Free Tartary, and China; and on the east by the North Pacific Ocean, which divides it from North America.

'The external communications of Russia, by water, are by the White, the Baltic and the Black Sea, and the Pacific Ocean. The Caspian Sea, the great lakes of Ladoga, Onega, Peipus, Ilmen, and Baikal, give rise to and facilitate the great *internal* commerce.'

It appears from Mr. Oddy's valuable and detailed account, that grand plans for the improvement of the country and the advance-

advancement of its commerce are carrying on with the utmost zeal and ardour: that vast canals have been formed, that others are now forming, and that more are under consideration. The North Sea is already united with the Baltic, and both with the Caspian and the Black seas. Petersburgh communicates by inland navigation with Astracan and the Crimea; and it will soon have intercourse by the same means with Archangel and Riga. Mr. Oddy thus sums up his account of these beneficial undertakings:

'By means of the canals already finished, a great part of *European Russia* has a communication with one or other of the seas by which it is bounded; and, as the rivers are numerous, and a general plan is followed, of constructing canals wherever they can be useful, in a very short time, its internal communications will be such as to furnish it with the means of transporting all its produce into other parts, by means of water carriage.

'As we have described a few of the principal rivers and canals, either completed, in execution, or contemplation, of that part of the Russian empire in Europe, we shall give the communication from the frontiers of China, by which the trade from thence, and that of Siberia, is carried on to the city of Petersburgh. This navigation first commences on the borders of China, passing by the Selenga to the Baikal Lake, from thence upon the Angara into the Yenissey, as far down as Yenissey; there the merchandise is unloaded and carried over a short track of land, and embarked on the river Ket; from thence down that river into the Oby; from which up the Irtish, the Tobol, and thence over land to the Tchussovaia, upon which river it is embarked again and falls into the Kama, and the Kama into the great river Wolga. By this conveyance it was estimated, that Russia drew, some years ago, merchandise to the value of no less than twelve millions of roubles.'

From the details here furnished, it appears that the increase of the Russian commerce, within these last thirty years, has been prodigious. The inland communications by water, and the land carriage by the sledge roads over the snow, by rendering the conveyance of goods easy and incredibly cheap, have wonderfully increased the activity and facilitated the operations of commerce.

It was not till the year 1588 that Great Britain began to trade with Russia by the way of the gulph of Finland. The vast proportion of the trade of this immense empire, which at present is engrossed by Great Britain, is known generally to every reader. It is laid down in these pages that the exports of Russia to this country are to those which she makes to the rest of the world in the proportion of sixteen to seventeen, while the imports so classed are only as one to five. Russia has at some periods exported 80,000 tons of iron, of which England

has been known to take 50,000; and the average export of that article at this time is calculated at 40,000 tons, of which three fourths are brought into our ports. In 1803, Russia exported 15,000 tons of flax, of which two-thirds fell to our share; and we uniformly deal in its hemp, and frequently in its grain, in the same proportion. In 1803, Russia exported 34,500 tons of tallow at the price of nearly two millions sterling; of which quantity, 27,450 tons fell to the share of Great Britain. The waste and improvidence in regard to wood, which prevails in Russia, occasioned a temporary suspension of the trade in that article; and at this time only a very limited exportation is allowed, nearly the whole of which is furnished to the demands of the British empire. It is the opinion of this writer that, by proper management, Russia might supply the whole European market with timber.

Mr. Oddy furnishes accounts of the several ports included in the vast dominions of the Czars; and they contain many very interesting and important particulars. The principal are Archangel, Petersburgh, Riga, Revel, and Liebau.

The interest of the following passages induces us to lay them before our readers:

'The Black Sea will furnish those articles through the Dardanelles, which England receives by the Baltic; therefore the trade of the Black Sea can never be one to be cultivated by this country: the voyage through the Marmora into the ports of the Black Sea will occupy nearly as long a period as one to Madras; and so long as the facilities are promoted, to convey the produce by the interior canals to the rivers falling into the Baltic, there never can be a trade carried on from Great Britain direct; her manufactures being in small compass and of greater value, will too be conveyed by the way of the Baltic. Indeed, when the canals of the interior, communicating with that sea, are completed, Great Britain might carry on her Turkey trade through that channel in time of war, rather than the circuitous one through the Mediterranean, loaded with heavy freights and high insurance, besides detention for convoy.

'Though Great Britain cannot derive any benefit from the local situation of the Black Sea direct, yet some few observations naturally arise on the subject, which are not a little interesting in many points of view.

'As Russia extends in civilization and refinement, her wants will increase, and her commerce extend; the soil and climate around this sea will derive every assistance from so great a power, and the encouragement given to commercial adventure in general, which is so much fostered as it is, by his present Imperial Majesty, that it may probably soon become very great, and be the cause of giving an entire new turn, not only to the commerce of the Baltic, but, most likely, to the politics of Europe. We have seen a wonderful change in Russia, in a short time, in transplanting its trade from the White

to

to the Baltic Sea; its next flight may, in the course of events and a short time, be to the Black Sea.

'The uncommon attention given by the Russian government to promote the trade of the Black Sea, and establish the port of Odessa, is a good deal similar to that of Peter the Great, in the building of Petersburgh, and the making of Sebastipol, a royal dock, and sufficiently proves the great importance attached to the situation and commerce in this quarter by Russia; we shall therefore give a few details of the rise, present state, and privileges granted to Odessa.

'ODESSA

is situated on a bay formed by the Black Sea, thirty miles distant from the mouth of the Dniester, and sixty from that of the river Dnieper called by the Turks, when in their possession, Koadjabeg,* and, so late as 1792, its shores were a mere plain. It is a secure and convenient bay, with a great depth of water; consequently it is seldom closed by the frost, which attracted the attention of the Russian government when it came into their possession, so that it is likely to become a second Petersburgh.'—

'An unprecedented activity is now displayed in the construction of moles, lazarettos, and buildings of every kind: large sums are granted for that purpose, without suffering this important concern to be delayed by any correspondence. One of the new moles has already a length of 215 fathoms, and the other of 180, each of which is to be extended to 315 fathoms, and raised 7 feet and a half above the surface of the sea. They are constructed after the manner of the piers at Bayonne, and will be made from 10 to 12 feet wide, exclusive of a parapet with embrazures for 30 pieces of cannon. The port will comprise an area of 60,000 square fathoms, and its entrance will be 150 fathoms wide, so that the ships may get in with wind at north-east, which otherwise is adverse. The port has a good anchorage, the bottom being of a fine sand and gravel. The depth of water within the port is sufficient to admit the largest ships of war.

'It is intended to render the Dniester entirely navigable, so as to bring down the produce of Galicia, and to form an aqueduct to Odessa. Round this new city it is an open country, not having any wood, which appears the only inconvenience.

'So rapidly has its commerce increased, that in the year 1803, before the first of November, there had already arrived 502 ships, of which 472 were loaded and sailed.'—

'In November 1804, its population amounted to 15000 souls, and above 2900 houses were already inhabitable, buildings were extending, and plans for its magnificence multiplying.

'Its chief export has hitherto consisted in grain, but from its situation, it will be the great depôt for the produce which can be conveyed down the different rivers, which fall into the bay near to it.

'His majesty gave directions and authority to the duke de Richlieu, to execute his favourite plan of raising this new city, and promoting

'* Or Gadschibeg.'

this new channel of commerce, and at the same time issued an ukase, dated March 5, 1804, to make this port an entrepôt, which shews the great consideration this new Alexandria enjoys.'—

'To give this new port every possible advantage, besides that of being an entrepôt, it has particular privileges granted it for a transito trade, by an ukase addressed to the directing senate, dated St. Petersburgh, the 5th of March, 1804.'—

'As a further proof of the great attention paid by government to the Black Sea, we find that Sebastipol, situated so advantageously upon the promontory of the Crimea, is made an exclusive dock and port for the imperial navy.'

According to our judgment, these proceedings in the Black Sea are of no ordinary moment, but furnish abundant matter for reflection to practical and speculative statesmen.

In the course of his useful inquiries relative to this immense empire, the author has discovered a new channel, 'by the way of Riga, up the Düna, and through the Beresinski canal, to join the Dnieper,' for carrying on the trade between Great Britain and Turkey; which is apparently a fond project, since he frequently recurs to it, and warmly recommends its adoption. He seems to be aware that the consent of Russia is a preliminary step to the change: but it may thence happen that the accommodation proposed may not be so readily extended by that power as he seems to suppose.—In an infant commercial state like Russia, before enlightened views and corresponding habits have prevailed, and have generated in the trading part of the people a nice sense of honour and scrupulous integrity, an institution such as is described underneath must be highly beneficial:

'The principal articles of Russian exportation, must be examined or bracked by competent sworn brackers: for this purpose, in 1790, sixteen Russian and fourteen foreign brackers for hemp; five Russian, and three German for tallow and oil; four Russian, and three German for herrings (the Russian herring-brackers also brack caviar and isinglass); one Russian and two German for tobacco; five Russian, and three German for yufts; two Russian, and one German for horse-hair and hog's bristles; one Russian and two German for hare-skins, were appointed.

'Such are the excellent regulations relating to the brackers, that if, through any neglect or fraud, an inferior quality is passed which ought not to be, the bracker, whose name is affixed in some articles, and especially appointed for others, is liable to a very severe punishment as soon as the proof is produced, so that a precaution like the one mentioned prevents the possibility of an inferior article being substituted for the real one, and every merchant is sure that what he purchases is the very article he agrees for.

'The merchant, in his purchases, has only to settle with a broker, who is likewise approved by the College of Commerce, and who makes a contract

a contract betwixt the buyer and seller. The goods are received and the business is dispatched.

'The articles subject to brack are: Hemp, Flax, Tallow, Hides, Yufts, Isinglass, Glue, Caviar, Hare-skins, Bristles, Wax, Cow and Horse Hair, Linseed, Hempseed, and Train Oil, Tobacco, Rhubarb, Masts, Pot and Pearl Ashes, Saltpetre, Castor of Beaver, &c. &c. &c.

'A certain rate is fixed to be paid to the bracker by the purchaser, which is very reasonable.'

The other countries, mentioned in the title-page, are treated much in the same way with Russia.—Prussia, the author observes, made up as it is of an aggregate of provinces, dependent heretofore on different states, has not reached that uniformity of manners, habits, and maxims, as well as of laws and usages, which distinguish older states; and consequently, in different parts of it, we find different modes of transacting business. Though in that country the principles of commerce are little comprehended, in no state are trade and manufactures the objects of more attention, and of the protection of the government; nor have its effects, though not always the most judicious, been on the whole without success. 'The House of Prussia,' remarks Mr. Oddy, 'has within the space of a century and a half, established a basis for its future commercial and maritime greatness, by its acquisition of part of Pomerania, of Polish Prussia, of Dantzic and Thorn, and of that part of Poland which is most favourably situated for the Baltic trade.—The whole length of these districts forms a coast of nearly four hundred miles on the shore of the Baltic; in which distance, some of the finest rivers fall into it.'

In 1799, the manufactures of Prussia were rated at seven millions sterling, and since that time they have considerably increased. The manufacture of linen in Silesia is the most considerable among them, and is unrivalled by any other in the whole extent of Germany. The bleaching, we are informed, is better conducted there than in Ireland, and a finer sort is made than any of which our sister island can boast. Among the Prussian trading towns, Mr. Oddy places Embden, Stettin, Konigsburgh, Braunsburg, Dantzic, Elbing, and Memel, as the most considerable; so great is the trade of the latter, that its exports in 1802 amounted to six hundred thousand pounds. Its principal branch is timber; which article alone employs seven hundred sail of ships, and may be calculated to amount in value to 350,000l. per annum.

As our intercourse has heretofore been so great with Dantzic, the subsequent particulars relative to it appear to merit attention:

'Dantzic,

'Dantzic, from the earliest period, was the granary of the north, and to judge of its piles of warehousing for that purpose, its trade must have been considerable; indeed, no place can be better accommodated in this respect, nor better regulations to prevent fire, robbery, or any irregularity. A short digression may not be uninteresting, nor unworthy of consideration in other countries.

'The principal warehouses here are upon an excellent plan, situated upon an island formed by the River Mottlau, running close by the city on one side, and another branch, by what is called the Forestadt on the other. There are three bridges on each side of the island, at the end of streets over it, from the city to the Forestadt. In the night, all the bridges are drawn up, excepting the two at the end of the main street, across the centre of the island, communicating betwixt the old city and the Forestadt. On this island are all the principal warehouses for ashes, hemp, linens, and the extensive granaries, containing seventeen streets, besides the large centre one, running the length of the island. To guard these warehouses are from 20 to 30 ferocious dogs of a large size, amongst which are blood hounds, let loose at eleven o'clock in the night to guard the warehouses, which are nearly equally divided by the main street, which passes over the middle of the island, as before described. To command and to keep the dogs within their districts, as well as the passengers from harm, at the end of each of the streets, leading to the main one, are large high gates run across: no light is allowed, nor any person suffered to live on this island. These dogs prowl about the whole night, and create great terror. It would be impossible to keep property secure amongst the hordes of Poles, Jews, and others, who resort here, otherwise, as no exemplary punishment amongst them would have half the effect that the dread of these dogs produces.

'In winter-time, when the water is frozen over, to keep the dogs in their proper district, there are three keepers placed at particular avenues, with whips to keep them in their range.

'No fire or robbery was ever known; and the expence to each building, with the immense property they contain, is very reasonable. Vessels, either from the interior or other quarters, laying alongside these warehouses, are not allowed to have a fire, or light of any kind on board, nor is a sailor or any other person suffered even to smoke. Their regulations partly extend to all shipping laying in the harbour.

'To resume the subject on grain: the Pole does not conceive himself paid for buying in the interior, the purchase of vessels, or making floats, and adding the expence of bringing it down, unless he gets 20 ducats per last for his rye, and 35 ducats per last for his wheat, which is equal to 19s. per Winchester quarter for the former, and 32s. 6d. per quarter for the latter. If the prices are less, no great supplies can be expected down from Poland. The quantities of grain sent from thence to Dantzic in any year do not so much depend upon great crops, as the plenty of water in the rivers for easy navigation in summer, and the high prices in Dantzic, as an inducement to bring it down.

'It

'It must be observed since the partition of Poland, that the quality of wheat, particularly by the Narew, is much improved. For other particulars we must refer, whilst speaking on this subject, to those observations made, when we treated of bringing it down ftom the interior.

'It must, however, be particularly remarked, that since Great Britain imported such vast quantities of grain, that Dantzic has participated in the advantages of that trade more than any country whatever. Next comes Mecklenburgh. Since 1793, the riches which have been brought into Danztic, by the exportation of grain and wood to Great Britain, is far beyond any moderate calculation: the quantity of specie abounding in this city, for its trade and size, exceeds any thing of the kind in any other place in Europe, and that chiefly within the short period mentioned. The greatest part of these riches have, no doubt, been occasioned by the great demand and importation of Britain.'

In this town, the transit trade is not allowed. It is observed by Mr. Oddy that, while the Elbe and the Weser are in a state of blockade, we must carry on our traffic with the Northern parts of Germany by means of that fine river the Oder, on which stands the considerable town of Stettin: but, in making this remark, he did not anticipate the interruption of the relations of amity between us and Prussia.

We are informed that in our trade with Prussia the balance is against us; that country takes from us little more than our colonial produce, while we take from her, grain, wood, and some of her manufactures, particularly linen; in which last, Mr. Oddy thinks, we ought to follow her example, not only in manufacturing but also in exporting.

The demands of England for corn have occasioned the exports of that article by Mecklenburg to double, and have given to agriculture an extraordinary spring: it may be called, says Mr. Oddy, a second Flanders, although its soil is infinitely inferior, and its climate less favourable. Rostoc, Wismar, and Lubec convey the surplus produce of this principality by way of the Baltic, as does the Elbe on the South. It has also other outlets.—Speaking of Lubec, the author observes:

'It is celebrated in history for having begun and being at the head of the Hanseatic League, which has already been fully treated of.

'Lubec, like all the other free imperial cities, is very limited in its territory; surrounded by Holstein, Hanover, and Mecklenburg. It produces nothing within itself, and therefore is entirely dependent upon foreign commerce. It is an entrepôt betwixt the Baltic and the sourthern parts of Europe; the produce of the former it receives to wait for the demand of the latter, before the navigation to the East Sea can be open in spring.

'Its

'Its advantageous situation as the centre betwixt the Baltic and the South of Europe, likewise for the interior trade of the North-West of Germany from and to the Baltic, in receiving and transporting the produce of each to the other, will make it always a place of great interest: whilst it has the farther advantage of partaking of the trade by the Baltic on one side, that of the Elbe on the other, and it is only forty miles by land from Hamburgh: with the facility of the Holstein canal joining the Baltic and the North Sea, it has the Stecknitz canal directly from its own harbour to the Elbe, at Lauenburg.'

The produce of Sweden for exportation consists of iron, tar, pitch, and a little copper: but in other articles it furnishes scarcely sufficient for its own consumption. A great increase has lately taken place in the quantity of Swedish iron produced, which now amounts to upwards of 50,000 English tons, and is to be ascribed to its superior quality, and the more convenient forms which are given to it. Of this quantity, Great Britain purchases more than the half.—Tar is the next considerable article of exportation, and it is superior to that which we procure from Russia and America.

Mr. Oddy justly observes that it would be of the greatest national benefit to Sweden, to complete the junction between its eastern and western canals, in order to unite the Baltic and the North Sea through the centre of her territory; since it would lay the foundation of independence in passing the Sound not only in her favour, but in that of other nations.

In the account of Denmark, Mr. Oddy gives very interesting descriptions of the difficulties attending a passage to and disembarkation at Husum and Tonningen; together with the mode of proceeding onwards into the country: but the details are too copious for quotation. All travellers to these parts, who are unacquainted with them, will be glad of the information contained in this volume, p. 338, &c. Tonningen is a small place, scarcely known to the world till the blockade of the Elbe and the Weser; since which time it has grown into notoriety.

'Its population in 1769 was only 1487. The resident inhabitants, in 1801, were only 1924, but on account of the great influx of strangers, the many establishments, and the business of the Elbe, the Weser, and that betwixt the Baltic and North Seas, passing through here, it is as crowded as a place possibly can be, and not inferior in charge and expence, to Hamburg, when in the zenith of its commercial career.'—

'This place, which has the trade of the continent now passing through it, is a small town in the Dutchy of Schleswig, on the right bank of the river Eyder, not far from where it falls into the North Sea, betwixt Eyderstadt and Dithmarschen; it has, for the considerable commerce it now has, bad accommodations, having but a small creek,

creek, which runs a few hundred yards in a curve from the river, by the town, and in which, not more than two or three small vesssels can lay abreast, if it is necessary to land and take in their cargoes there; but the vessels in general, lay at anchor in the open river, above the town, where they load and discharge.'

With regard to Zealand, it is well known that, on its entrance point in the North west, stands the castle of Cronenburg, which is within a mile of Elsineur, and exactly opposite to Helsenburgh on the Swedish coast; which two fortifications command the Sound, so that all the ships which pass are liable to be interrupted by them. The Great Belt on the other side of Zealand is not so narrow as the Sound: but the islands on all sides, and the circuitous navigation both before it is entered and after a vessel has passed it, render the passage by the Sound preferable for ships sailing out of or into the Baltic Sea.

'From the year 1348 till 1659, that is, for 311 years, the Sound duties caused continual disturbances, and besides other evils, such as the destruction of the Danish fleet repeatedly, those quarrels occasioned Copenhagen to be burnt twice. The English, Dutch, and French, at last, in 1659, entered into an union to compel the Danes to fix those duties permanently, on a reasonable footing; yet, even that did not lay the matter to rest entirely, for there have been contests with Sweden on the same point; and, so late as 1720, there was still a misunderstanding; and with the Dutch in 1731.

'In 1653, that is, a century and a half ago, it was farmed by the Dutch at a sum equal to 35,000l. which was equal to about 100,000l. at the present time.

'It is not necessary to enter into any discussion with respect to the right by which this toll is demanded, or why Denmark has any greater or better title to it than Sweden; for, though it has often been disputed, it has so long been submitted to, that time appears to have settled the question of right.'

The net duties collected here average annually about 600,000 rix dollars.

It is conjectured by Mr. Oddy, that if the present oppression of the Dutch provinces continues, many of the inhabitants will emigrate to Holstein, and carry with them the true spirit of commerce; which appears to be the only thing wanting, to make that state one of the most flourishing parts of Europe. The ordinary quantity of corn exported annually from the Baltic amounts in value to about two millions: but it has in some years reached the sum of eight millions, which is more than the regular profit of all our West India islands put together! The share of our united kingdom in the Baltic trade is here set down at more than two thirds of the whole, and its cost to the country at nearly nine millions.

Our trade to Germany has for several years taken from us commodities to the amount of eight millions; these consist of a tolerably equal assortment of East and West India produce, and of our manufactures at home, such as woollens, cottons, and hard-ware. Mr. Oddy informs us that, if the same spirit prevailed in the empire of Germany that has been shewn in Russia, the interior navigation of that country would not only produce a source of riches to itself, but give great facility to and increase commerce in general. He presents a very interesting detail of the restrictions which affect the transport of goods along the Elbe, and defeat the great advantages which that fine river commands: but he thinks that at some future period it will convey the principal commerce of Europe.

As it is the head of foreign commerce which constitutes the principal merit of this work, we shall advert but briefly to those parts of it which relate to the subject of our internal commercial policy, and our resources.

The author is of opinion that we ought to grow all the grain, hemp, and flax which our consumption requires; and that we should import our timber and other naval stores from our North American colonies. These positions we deem very controvertible. In a country in which commerce is so free as it is in our own, and in which those who engage in it are not less enlightened than enterprizing, it may be presumed that the level which traffic finds cannot be materially improved by theory; and, moreover, the theory on which Mr. Oddy proceeds is an exploded one. The ingenious author of the "Essay on Population" would have us devote ourselves less to manufactures and commerce, and more to agriculture; while the present writer seems to calculate on some secret concealed energies, and exhorts us to render ourselves wholly independent of the world, and to increase our application at once to all those three pursuits. With regard to economical arrangements in a country so greatly advanced in knowlege and experience, it is advisable to leave them to the individuals who engage in them;—the *laissez nous faire* is the best rule that can be observed. We are far from thinking that, by diminishing our commerce and our manufactures, we should advance our agriculture; and indeed we are confident that the effect would be the reverse. Our experience shews that commerce and manufactures operate beneficially on agriculture, and occasion it to flourish; and the reasons of this reciprocal influence between these pursuits are obvious on the least reflection.

We are convinced that the plan of becoming independent of the rest of the world, by confining ourselves as much as possible to articles of our own growth and creation, is not the best

best course for a nation which devotes itself so eminently to commerce, and which depends on it not only for political consideration, but for existence as a state. This maxim may suit a people who are much excluded from traffic by their situation: but a very different one ought to be adopted by a country distinguished by skill and enterprize, which leaves all others so far behind in facilities for trade, and whose inhabitants so much excel the rest of mankind in their manner of conducting its operations. It will be the object of such a community so to direct its labour as that it shall be most productive; it is this consideration which will regulate the application of its industry; and whatever branch of this industry will most advance its wealth, that branch it will follow. We are aware that it will be contended that, as matters at present stand, the true principles of commerce must, in many instances, yield to political considerations: but if we are not prepared universally to deny this proposition, we have no hesitation in saying that it has frequently been admitted with too much facility, and that greater stress has been laid on it than has been supported by any just reasoning on facts that has ever come to our knowlege. If the nature of the soil invites to pasture, let not husbandry be forced on the district, because a greater population will be subsisted by following that mode; if the conveniences of a situation make it the interest of the ingenious and enterprizing to forbear the toils of agriculture, in order to operate on the iron or stone, or to work the imported cotton, let no edict or authoritative mandate interfere, and the state will flourish more than if its industry were regulated according to the wisest rules which the most enlightened politician could devise. We have therefore no sanguine expectations that any solid benefit would follow from changes in our internal economy, or from the extinction of the trade with the Baltic, and its transfer to our North American colonies; and we are contented to leave much, if not all, to the direction which the industry of the country takes of its own accord.

Occasionally, the present author alludes to Dr. Adam Smith, and never directly impeaches his principles: but it will be seen that the plans, on which we have been observing, are founded on notions which it was the object of that great author to expose, and in which we are of opinion he completely succeeded. Had Mr. Oddy united to his extensive practical information, an acquaintance with true theory, his work would have been free from numerous errors and incongruities by which it is at present disfigured; in that case, we should not have heard so much about the balance of commerce, the mis-

chiefs of an importing trade, and the expediency of changing the channels of industry.

We agree with the author in the opinion that the state is urgently called to examine the subject of the poor laws: but he must forgive us if we can only allow to him the merit of sounding the alarm, of placing the subject in a strong light, and of collecting important facts relative to it. His plans, we think, prove his zeal and his patriotism, but are wholly inadequate to the end proposed. Nobody who has not deeply reflected on the principle of population, and made himself master of the very elaborate and satisfactory illustrations of it which have lately been afforded by Mr. Malthus, can be competent to discuss the important subject of the parochial code. The present author has totally mistaken the causes which produce the evil; and therefore it will excite no surprize that not one remedy which he proposes is in the remotest degree calculated to remove it, or to alleviate its pressure. This observation is not meant to be extended to that part of his disquisition which treats of expenditure. On the contrary, the facts connected with this subject, and those which regard our internal resources, which are here collected together, add materially to the value of this volume, and will cause it to be highly prized by those whom its crude and incongruous doctrines cannot mislead. To the young and untaught, we by no means recommend it; because the ingenuousness of the author, and the confidence with which he writes, would be apt to impose on them, and their tender minds would imbibe much which they would afterward be obliged to unlearn: but, with all its imperfections, the service which Mr. Oddy has rendered to the public is very considerable, and such as will entitle him to the acknowlegements even of those who least approve his partial views and erroneous representations. For the authenticity of a great number of the statements here made, the veracity of the writer is the sole guarantee: but we are aware of no reasons for calling it in question. Though as a composition the work is without pretensions, and in this respect shuns the eye of the critic, yet the vast mass of information which it professes to communicate cannot fail to fix the attention of public and mercantile men, and of the lovers of general knowlege.

We ought to add that the practical value of this production is exceedingly enhanced by the numerous tables, and original documents, relative to the commerce and resources of this and other countries, with which it is enriched.

To.

ART. II. *Memoirs of the Literary and Philosophical Society of Manchester.* Second Series. Vol. I. 8vo. 7s. Boards. Bickerstaff.

SINCE the establishment of this respectable Society, it has published five volumes of the papers which have been furnished by its members; and of which we have duly reported the contents. Some of these books being out of print, a new series has been commenced, of which the first volume is now before us.—The

PHILOSOPHICAL PAPERS

open with an *Essay Physiological and Experimental, on the Effects of Opium on the Living System.* By William Alexander, M.D.—The author here proposes to examine the following questions; '*Can the effects exerted upon the living system, by the operation of Opium, be accounted for, without the agency of the nervous system?* 2d, *What is the nature of that operation, whether sedative or stimulant?*' The full discussion of these questions, it is obvious, would embrace many of the most important doctrines of physiology, and in their consequences would involve some of the points which have afforded the most ample field for controversy. Without entering on the consideration of these topics, we shall confine ourselves to an analysis of the present Essay; stating the nature of the experiments, their results, and the conclusions which are drawn from them. Dr. A.'s object in the first part is to oppose the hypothesis of Fontana, that opium does not act on the nerves but on the blood; and he begins his experiments by applying the watery solution of opium to the hearts of frogs and rabbits, when removed from the body; the effect of which was decidedly to diminish the number of contractions. In order to observe whether the opium can communicate its operation to the different parts of the system, independently of the circulation, he injected some of the solution into the stomachs of frogs, from which the hearts had been removed, and found that the irritability, after a short time, was destroyed. Still farther to illustrate the subject, he injected two equal portions of the opiate solution, one into the jugular, the other into the crural veins of two rabbits; in the first case, death ensued in a few minutes; in the other, only a slight degree of stupefaction took place. From these experiments, it seems fair to infer that Fontana's hypothesis concerning the action of opium is untenable, and that the effect of this substance is not produced on the blood, nor is conveyed to the different parts of the body by means of the circulation. On the other hand, when opium

was applied to the brain, it exercised an almost immediate action on all the voluntary muscles.

Dr. Alexander afterward performed a set of comparative experiments, which seemed to place the subject in a still clearer point of view. He separated the lower extremities of a frog from the upper part, except that the nerves were left entire; and he found that opium, injected into the stomach, caused the lower parts to become paralytic;—afterward, the contrary experiment was performed; the nerves were divided, while the muscles were left entire, and opium injected into the stomach in this case did not affect the lower extremities, which still continued sensible to the action of stimuli.—We are fully disposed to agree with the author that his experiments entirely overthrow the theory of Fontana, while they prove that opium acts immediately on the nervous system.

Dr. A. next inquires into the nature of the operation of opium. The first set of experiments were made by applying it in solution to the hearts of frogs and rabbits; while to the hearts of some other animals of the same kind, spirits of wine and ether were applied; and the result was, that all these different substances apparently acted in the same manner. The effects produced were,

'1st. Encreased force and frequency of the contraction of the heart upon the application of the above-mentioned powers to that organ.

'2d. A diminution of force and frequency, in the contractions, in the space of two minutes afterwards.

'3d. The same effect, but in a less degree, produced upon the second application of the same substances.

'4th. The entire cessation of motion in the heart when the same substances were injected into the cavity, in a quantity greater than what was applied to the furface of the heart.'

In the next course of experiments, the opium, the ether, and the alcohol were separately injected, first into the stomachs of frogs and afterward into those of rabbits; and in both cases, the effects of these different substances were nearly similar. In the frogs, they all diminished the velocity of the pulse: but, when rabbits were made the subject of experiment, the action of the heart and arteries was uniformly increased.—Observations were then made on the influence manifested on the pulse and the nervous system by the introduction of opium and alcohol into the human stomach. They were found to be nearly similar; and Dr. A. draws these inferences from them;

'1st. It is concluded, that an encreased action of the heart and arteries and energy of the brain resulted from the action of opium, æther, spirits of wine, and spiritus volatilis aromaticus taken into the stomach.

'2d. That

'2d. That in the course of an hour or there-abouts, after the administration of the above several substances, the actions which they had induced were diminished, and a state of debility succeeded

'3d. That an equal quantity of the same substances which had once excited action in the system, was inadequate on a second exhibition to raise the action of the system to the same point again.'

From this view of the operation of these substances, he is led to propose the following definition of a stimulus; 'a power which increases the action of the heart and arteries, the energy of the brain, and diminishes or exhausts the excitability of the system.'

We have next an account of the effects produced on the body by the application of a sedative; the one which the author selected for the purpose of his experiments being intense cold. He observed the consequences resulting from the application of a freezing mixture to a frog and a rabbit; and he afterward compared the difference between them in the cases of a young and an old animal. He then makes the following deductions:

'1st. The sedative effect of cold diminishes all the actions of the body.

'2d. It diminishes the temperature by experiment.

'3d. It diminishes the action of the heart and arteries in the first instance, by rendering them quick and feeble; in the second by rendering them slow and feeble.

'4th. That its effects are experienced more readily by adult than young animals.

'5th. That animals of an inferior temperature whose excitability is abundant, can subsist under lower degrees of this power, than warm-blooded animals, or those whose excitability is not so abundant.

'6th. That animals exposed to its effects have their capacity to receive the action of stimulants encreased.

'From these conclusions, it appears proper to express a sedative in the following manner:

'A power which diminishes the action of the heart and arteries, the energy of the brain, and encreases the excitability of the system.'

Admitting the justice of the definitions here proposed, and the accuracy of the experiments, we can scarcely hesitate as to the class in which we should place opium; its effects altogether coincide with the idea which the author entertains of a stimulant action; and, moreover, they were found on experiment to be very nearly similar to those of alcohol and ether.

The experiments of Dr. Alexander appear to have been conducted with every attention to accuracy; those in the first part of the inquiry are numerous, and their results are decisive: but with respect to the latter series, they are more scanty, and equivocal. To the definition given of a stimulus,

however, we think that the action of the gaseous oxid of azot forms a powerful objection; and to that of a sedative, we may oppose the effects of the hydro-carbon, and carbonic acid: not to insist on *Digitalis* and the *Lauro-cerasus*.—If we were to allow the accuracy of the author's experiments and definitions in their full extent, we must be obliged to conclude that disquisitions of this nature afford but little aid to the medical practitioner; since he must still continue to give opium in order to relieve pain and procure sleep, and to administer wine or ether when he wishes to remove languor or debility; and he will not be persuaded that he could reverse his prescriptions, and stimulate by opium or soothe by alcohol.

Observations on the Effect of Madder Root on the Bones of Animals. By Mr. B. Gibson.—The property which madder possesses, when mixed with food, of reddening the bones, has given rise to many experiments and speculations concerning the formation of these bodies. Duhamel endeavoured to prove, from the effects of this substance, that they were produced from successive layers of the periosteum: but this opinion is now discarded; and there is reason for believing that, in his experiments, he saw results which coincided with his hypothesis, rather than such as would have appeared to an unbiassed observer. For a long time, no one was able to explain why the bones alone should acquire the scarlet colour, and why it should not be communicated equally to all the white parts of the animal: but Dr. Rutherford succeeded in removing this difficulty; and he found, by a decisive experiment, that madder has a chemical affinity for the phosphat of lime: so that, when these two substances are presented to each other in the blood, they unite, and form a scarlet compound, which is afterward deposited in the bones.

It is generally supposed that, in the process of tinging the bones, the white particles are removed by absorption, and those which are coloured are deposited in their room by the secreting arteries. On a reference to fact, however, this opinion cannot be maintained; since it has been found that the complete change of colour in the bones was effected in a week, and, by omitting the madder, has been removed in about the same space of time. To suppose that the whole mass of bone can be changed in a few days is palpably absurd, yet to this opinion are we reduced, if we admit the complete removal and deposition of the osseous particles on every alteration of colour. An experiment which was performed by Mr. Gibson appears to obviate the difficulty, and to afford an easy explanation of the fact. He found that the serum of the blood possessed an

affinity for the colouring matter of the madder, and had the power of separating it from the phosphat of lime.

'Thus, when an animal has madder mixed with its food, the blood becomes highly charged with it, and imparts the superabundant colouring matter to the phosphate of lime, contained in the bones already formed; as it circulates through them and moistens them throughout. But as soon as an animal has ceased to receive the madder, and the blood is freed from the colouring matter by the excretions, the serum then exerts its superior attraction, and by degrees entirely abstracts it from the phosphate of lime, and the bones resume their natural whiteness. In short, the bones are at one time dyed by the colouring matter, at another time bleached by the serum.'

Experimental Inquiry into the Proportion of the several Gases or elastic Fluids constituting the Atmosphere. By John Dalton.—When we gave our account of a former volume of these memoirs, we noticed Mr. Dalton's novel speculations on the constitution of the atmosphere *; and in several articles of the present publication, he illustrates the principles of his new doctrine, and investigates the consequences which are deducible from it. This first Inquiry is proposed,

'1. To determine the weight of each simple atmosphere, abstractedly; or, in other words, what part of the weight of the whole compound atmosphere is due to azote; what to oxygen, &c. &c.

'2. To determine the relative weights of the different gases in a given volume of atmospheric air, such as it is at the earth's surface.

'3. To investigate the proportions of the gases to each other, such as they ought to be found at different elevations above the earth's surface.'

Mr. D. remarks that, on the hypothesis of the atmosphere being a chemical compound, these three objects of inquiry become consolidated into one; although, on his principles, they are essentially distinct. To ascertain the first point, it is necessary to find how much the whole volume of the atmosphere is diminished by the abstraction of each of its ingredients, the pressure remaining the same: whence he is led to offer some remarks on the different eudiometrical processes; and he gives the preference to the nitrous test, but points out some important precautions respecting its employment. When the nitrous and oxygenous gases are added together, he thinks that either nitrous or nitric acid may be produced, according to the method in which the operation is conducted. If a narrow tube be used, and the gases be not agitated, nitric acid will be formed: but, if they be hastily brought into contact, nitrous acid will be the result. We are not so fully informed as we

* See Rev. Vol. xlvii. N. S. p. 71.

could have wished respecting the foundation on which this opinion is built: but we apprehend that it will appear to most persons a great objection against the use of the nitrous gas, that the result of the experiment must depend so much on the mode in which it is conducted.—With regard to the quantity of oxygen, he agrees with the estimates of Berthollet and Davy, in supposing it to be uniformly 21 per cent. The specific gravity of the oxygenous being to that of the azotic nearly as 7 to 6, it follows, on Mr. Dalton's principles, that the upper strata of the atmosphere should contain a less proportion of the former substance. The observations that have hitherto been made, however, do not appear to countenance this supposition; and the author acknowleges that, according to the experiments of Guy-Lussac, air taken from an elevation of four miles did not differ from that which was at the surface of the earth.

On the Tendency of Elastic Fluids to Diffusion through each other. By John Dalton.—Experiments such as are here detailed, if sufficiently varied, and conducted with the requisite accuracy, must be considered as decisive either for or against Mr. Dalton's hypothesis. The apparatus consisted of two phials, connected together by a slender tube; they were filled with gases of different specific gravities, and were then placed in a perpendicular position, the heavier gas being in the lower vessel. After the interval of an hour, they were separated, and the object was to see how far the heavier gas had diffused itself through the upper phial. In the first set of experiments, carbonic acid gas was employed; no effect was immediately produced, but after some time a quantity of it was always found in the upper phial. Hydrogen was next used; this was put into the upper vessel, and a quantity was detected in the lower one. In a third set of experiments, nitrous gas was employed; and when oxygenous or atmospheric air was in the other vessel, it appeared that there had been a less mixture of the gases, than when those were used which had no affinity for each other.—The author confesses that the result was unexpected; and to us it appears so very singular, that we cannot but suspect some inaccuracy: indeed, the whole of these experiments, considering the importance of the object, are related in too vague a manner; and they are not sufficiently numerous to establish the point in question.

On the Absorption of Gases by Water and other Liquids. By John Dalton.—This paper commences by a series of propositions which, we conclude, are the result of experiments, although this is not in all cases specified. Mr. D.'s second proposition contains a very remarkable statement, viz. that the

quantity of the different gases, which can be absorbed by pure water, is either precisely the bulk of the water, or a part of it exactly equal to the cubes of the reciprocals of some of the natural numbers, equivalent to the fractions $\frac{1}{8}$, $\frac{1}{27}$, $\frac{1}{64}$, &c. For the proof of this extraordinary concurrence, he refers, in a general way, to his own experiments, and to those of Mr. Henry: but Mr. Henry's experiments, as published in the Phil. Trans. for 1803, do not exhibit these proportions, and none of Mr. Dalton's own are specifically stated. He agrees with Mr. Henry in supposing that all gases, which enter into water by means of pressure, are only mechanically mixed with it; and he imagines that each gas is retained in the fluid by the pressure of a similar kind of gas only: no other, which may happen to be incumbent on the water, having any efficacy in this respect. He candidly acknowleges that the circumstance of different gases being absorbed in different quantities is an objection to his hypothesis; and he indeed throws out a conjecture that it may depend on the weight and number of their ultimate particles: but this is mere speculation.—On the whole, although this memoir exhibits much of that acuteness and originality which we observe in Mr. Dalton's works, yet the facts are so novel and the opinions deduced from them are so remote from those which are generally adopted, that the experiments on which they are built ought to have been stated at full length, and detailed with the utmost minuteness.

An Essay on the Theory of mixed Gases, and the State of Water in the Atmosphere. By Mr. John Gough.—This author attacks Mr. Dalton's hypothesis respecting the constitution of the atmosphere; to which he objects from theory and experiment. He begins with attempting a *reductio ad absurdum*; and, admitting the existence of the hypothesis, he endeavours to shew that it is incompatible with natural phænomena. He enters on a mathematical demonstration, to prove that the component gases of a mixture possessing separate equilibria must have a common centre of gravity; and conversely, that, if they have not a common centre of gravity, they will not possess separate equilibria. It is supposed that there may be such an adjustment of the particles, as that the centres of gravity of the different gases may coincide; an adjustment which is necessary in order that their separate equilibria may be established: but this arrangement, he thinks, cannot be permanent, because the least addition or subtraction of either of the constituent gases will, it is said, disturb the mixed fluid so as to separate the centres of gravity, and thus permit the heterogeneous particles to obey the laws of their specific gra-

vities.—We believe that this will be found to be a correct view of Mr. Gough's argument: but, if we mistake not, its weight altogether depends on a position which he gratuitously assumes, and which, we apprehend, will not be admitted by his opponent, that, although the particles of which the gases consist be inelastic towards each other, the gases themselves act reciprocally according to the laws of elastic bodies.—The essay concludes with some objections to Mr. Dalton's opinion respecting the state of aqueous vapour in the atmosphere. From some experiments which the author has performed, he concludes that moist air expands more, under the same circumstances, than dry air; whence it is inferred that the vapor does something more than merely diffuse itself through the pores of the air.

A Reply to Mr. Dalton's Objections to a late Theory of mixed Gases. By Mr. John Gough.—The preceding essay having been shewn to Mr. Dalton, he endeavoured to repel the objections to his theory in a letter to Mr. Gough; to which this paper is an answer. It seems somewhat extraordinary to publish a reply to an unpublished letter: but, as it appears that a considerable part of the letter is quoted by Mr. Gough, the reader may be able to comprehend the scope of the argument. Mr. Dalton answered the objection relative to the disturbance of the common centres of gravity, by supposing that the force of gravity on any particle is far surpassed by its repulsive force: but this supposition Mr. Gough considers as altogether contradictory to a fundamental principle in mechanics; and he still seems to adhere to his position that the fluids, in the aggregate, will act on each other as elastic substances, although this will not be the case with the individual particles.—Mr. D. had expressed some doubts respecting the accuracy of Schmidt's experiments on the expansion of dry and moist air, the results of which had been employed by Mr. Gough in some of his deductions. A part of the paper before us is therefore occupied in an attempt to repel Mr. Dalton's insinuations; yet, notwithstanding this circumstance, Mr. Gough confesses, in a postscript, that he has since been himself induced to suspect their accuracy. The subject is farther discussed in the next paper; with which, for the present, the controversy concludes.

Remarks on Mr. Gough's two Essays on the Doctrine of Mixed Gases; and on Professor Schmidt's Experiments on the Expansion of Dry and Moist Air by Heat. By John Dalton.—M. Schmidt's experiments, the correctness of which had become one of the subjects in dispute between Mr. Dalton and his opponent, were known

known to the English reader only by means of a paper written by Mr. Kirwan, printed in the Transactions of the Royal Irish Academy, Vol. VIII. in which the results are quoted, without any account of the apparatus, or of the manner in which they were performed. Mr. Dalton, however, procured the original work; and he has found from it that Mr. Kirwan has committed some very considerable mistakes in his statement of the experiments. In fact, the numbers assigned by Schmidt are not very wide from those which were determined by Mr. Dalton himself.

With respect to the general merits of the controversy, it appears to us that Mr. Dalton has the advantage over his adversary in the clearness both of his conceptions and of his language: but we think that he is frequently too hasty in his deductions, and that his experiments are neither sufficiently numerous, nor have been performed with adequate accuracy. We would recommend, indeed, that both the parties should apply themselves more to experiment and less to abstract reasoning.

A Description of a Property of Caoutchouc, or Indian Rubber; with some Reflections on the Cause of the Elasticity of this Substance. By John Gough.—Some circumstances respecting the Caoutchouc, or Indian rubber, are here mentioned, which had not been previously noticed. Mr. Gough found by experiment that, when the substance was much distended, a portion of its caloric was extricated; it was also observed that a piece of it, when kept permanently stretched, was shortened by heat, and lengthened by cold; and an increase of temperature likewise diminished its specific gravity. If it be stretched in warm water, it retains its elasticity: but if, when stretched, it be placed in water colder than itself, it remains distended until heat be applied, when it again contracts. Hence it is concluded that the elasticity of caoutchouc depends on caloric contained between its pores; and that, if the caloric be removed from it, the elasticity is destroyed. By distension, the pores are forcibly diminished, and a quantity of caloric is extricated; while the affinity, which exists between the substance and caloric, gives it a tendency to return to its former figure, in order that, by the enlargement of the pores, the original quantity of caloric may be received.

On the Use of the Sutures in the Skulls of Animals. By Mr. R. Gibson.—The uses which have been assigned to these divisions of the skull are here supposed to be either erroneous or insignificant; and Mr. Gibson accordingly undertakes to substitute one that shall be more satisfactory. It is admitted that the cylindrical bones are lengthened, not by an extension of their whole

whole substance, but by an addition to their extreme parts; and, from analogy, we may infer that the same takes place with respect to the flat bones. While, however, it was necessary to allow of some space in which the bones might be permitted to increase at their edges, it was also requisite that they should be so far united, as not to admit of being displaced by any moderate degree of external violence. For this purpose, points of bone from either edge project, and rest on the internal plate of the opposite bone; and thus an union is formed, while the bones are kept in some measure distinct. When the parts have acquired their full size, and the process of ossification ceases, the sutures become no longer necessary, and the bones coalesce.—An opinion nearly similar to that of Mr. Gibson had been previously supported by Soemmerring in his work *De Corporis Humani fabricâ*, 1794: but Mr. G. states that he was ignorant of this circumstance when he wrote his present essay.

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Miscellaneous Papers.

On the Machinery of the Ancient Epic Poem. By the Rev. George Walker, F.R.S.—Partial as scholars may be to the mythology of the Greeks, as having formed a part of their juvenile studies, we cannot contemplate it through the clear medium of reason and philosophy, without perceiving it to be a mass of impious and disgusting absurdity; and the same enlightened judgment, which reprobates the polytheism of the Greeks and Romans, must decide against its effects in what is termed the machinery of their poems. It is impossible to controvert the observations of Mr. Walker on this subject; and indeed his remarks are so very obvious, that we think he needed not to have laboured them to the extent to which they are here carried. Homer, however, took not only his Men but his Gods as he found them; and the figure which they make in his poem is not more ludicrous and revolting, than the creed, worship, and ceremonies of idolators, must ever appear to persons who enjoy rational notions of religion. The gods of Homer were deified mortals; and they are exhibited by the poet with the vices and absurdities belonging to such personages. They as much constituted the superstition of his time, as witches, necromancers, and sorcerers formed the object of that of the gothic age; and though we now subject both to similar ridicule, their introduction into epic compositions is declarative of the credulity of the people at these two periods. When, like Mr. Walker, we re-trace our youthful studies, we are disgusted with passages which formerly pleased us; and instead of applauding

plauding the exploits of the Gods and Goddesses of the antient epic, we wonder that we should ever have been amused with so miserable a machinery; which, as Mr. W. observes, is 'puerile, with no consistency of character; beneath human nature, and, having no dignity in itself, is incapable of conferring a dignity on a poem which uses it, and uses it as a principal substratum.'

Mr. Walker combats with success the notions which have been entertained in favour of the antient epic; 1st, that the antients intended to make one great moral pervade their poem; and, 2dly, that in their celestial machinery a sublime allegory is contained. Homer's gods and goddesses were never more roughly treated than in this Essay; they are not only represented as miserably exposing themselves, but by their 'weakness, caprice, passion, and crime, digging up the very foundations of honour and virtue in the human mind.' Such deities must certainly be very bad company; and we agree with Mr. W. that to introduce such raggamuffins, when their agency is superfluous *, cannot confer any real dignity on the productions of the Muse.—Towards the end of the dissertation, the poems of Homer and Milton are compared with each other, with respect to their display of preternatural agency:

'They are not unlike in several respects. As Homer's has been observed to be the history of gods, Milton's may be said to be that of devils.—The gods of the one, and the devils of the other are nearly of equal credit; the former altogether, and the latter for the greater part, being the creatures of a popular, and fabulous superstition. Homer had his Pantheon, Milton his Pandæmonium, each their courts and councils, and each a supreme regent. But wherein they differ, the difference is immense in the estimation of the two poems, with respect to their supernatural machinery. Willing or unwilling, man was subject to the caprice and violence of Homer's gods, and these gods usurped over the whole field of human action. While only by the consent of his own will could man be subjected to the influence of Milton's devils; and, if suffering under this influence, had still his refuge in an Almighty, wise and beneficent being. From the tyranny of Homer's gods, man had no refuge whatever. In the court of Homer's heaven all was discord and misrule; god was opposed to god, and all the pretended power of Jove was impotent to reconcile the contending deities, or by awe reduce them to submission. Milton's Satan was truly sovereign, and an union of sentiment and design

* 'It is the reproach of the ancient epic poems, that the Gods are generally introduced where their agency is superfluous and where human agency is fully sufficient:' but perhaps this reproach is no better founded than if we were to accuse the moderns of ascribing to the superintendance of Providence, those events which appear to be accomplished by ordinary means.

pervaded

pervaded the whole of his gloomy domain. Milton's devils, though wicked beyond the stile of Homer's gods, are uniformly grand, they exhibit that sublime of the terrific, which the epic aspires to. Homer's gods, though wicked enough, are as foolish and freakish as they are wicked, they are not superior to what we may conceive of the lowest rabble in Milton's hell. I enter not into the heaven of Milton, and, perhaps, it would have been as well, if he had not so familiarly unveiled that sacred region. But there Homer presents no parallel, and the comparison fails. The picture of man also in the two poems is greatly in favour of Milton, and shews the advantage, which is derived to the mind, that has received a purer and nobler faith. Indeed to illustrate this advantage, and by contrast excite a stronger impression of the meanness and grossness and worthlessness of Homer's supernatural machinery, was my direct view in this comparison.'

When the principles of true taste are cultivated, and sound judgment dissipate the illusions of prejudice, then we cease to be charmed with the wild vagaries of fiction, but seek our pleasure from the poets of reason.

On the Use and Abuse of Popular Sports and Exercises, resembling those of the Greeks and Romans, as a National Object. By Samuel Argent Bardsley, M.D.—The object of this essayist is both humane and patriotic. From a close examination of the sports and exercises practised in antient and modern nations, Dr. Bardsley deduces this important maxim; that 'every habit, which wears out the sympathizing sensibility of the heart, proportionally disqualifies man from exercising the pleasing duties and tender charities connected with public and domestic life;' and he ably combats an assertion indiscreetly made in the Senate, that ferocious and barbarous exhibitions tend to excite brave and manly courage. It is observed that the popular games and exercises of the Greeks were better calculated to fortify the body, and to discipline the mind, than those of the Romans; that the noble energies of the latter, so far from being increased by the bloody spectacles of the amphitheatre, were diminished by them; and that these horrid recreations belong to the history of the decline of that people. In reviewing the sports and exercises of the people of England, Dr. B. classes them under two heads; first, the sports which are derived from the animal creation; and secondly, the amusements which depend on bodily exercises and personal contests. A decided condemnation is pronounced on all those sports which result from torturing animals, such as cock-fighting, bear-beating, bull-baiting, &c. Some shocking instances of cruelty practised in bull-baiting are adduced; on which it is observed that 'wanton deliberate barbarity is dishonourable to our nature, and contrary to the principles of natural religion, honour, justice,

justice, and humanity.' Dr. B. contends for the abolition of all barbarous diversions, and 'especially hopes that the sport of bull-baiting will be the first offering made at the shrines of humanity and justice.' An apology is attempted in favour of Hunting; which, it is remarked, 'in all stages of society, has formed a principal share of the business and pleasure of man.'

When Dr. B. adverts to those amusements of the people of England which arise from bodily exertion, and to their personal contests, he particularly directs our attention to the subject of boxing; which he pronounces to be the best mode of deciding personal quarrels, far preferable to the Snicker Snee of the Hollanders, the Gouching of the Americans, the Stilletto of the Italians, and the bestial mode of fighting prevalent among the lower orders of people in Lancashire. He protests against the exhibition of pugilism on a public stage as an amusing spectacle, and as affording an opportunity of gambling: but he recommends Boxing as the most eligible means of offence and defence; and in order to abolish the savage mode of personal contests in Lancashire, in which noses and ears are often bitten off, he suggests that at wakes prizes should be held forth for the encouragement of boxing as the most manly and least dangerous mode of terminating the quarrels of the populace. He is desirous of introducing the diversion of Sparring with Mufflers.

Reverie, considered as connected with Literature. An Essay, by the Rev. Johnson Grant, A. B., of St. John's College, Oxon.—Remarks that merit the attention of Students will be found in this paper, the author of which has investigated a subject by which much time is lost to literary men. By the indulgence of *Reverie*, in which our thoughts wander from the object before us to other and foreign reflections, the progress of study is interrupted, and the mind becomes enervated; it is therefore of consequence to guard against it. Mr. Grant draws a parallel between reverie and abstraction. The latter he defines to be 'the act of attending closely to the object of study, and the effort to collect our thoughts;' the former to be 'the letting loose our thoughts to wander whithersoever they will.' In short, Reverie is 'the want of the power of abstraction;'—a want of a very serious nature to those who are desirous of intellectual improvement.—After having explained the various kinds and degrees of Reverie, Mr. Grant, as a mental physician, proceeds to prescribe some methods by which this diseased state of mind may be regulated and modified; for he neither aims at, nor wishes to effect, a perfect cure. Great stress is laid on the *sanum corpus* as essential to the *sana mens*:

and

and he therefore first recommends 'frequent and habitual exposure to a pure and bracing atmosphere;' and in the next place 'temperate living, equally removed from abstinence and excess:'—observing, on the subject of stimulants, that 'whatever destroys the balance between body and mind, whatever impairs the tone of the animal fibre, ought to be studiously avoided by those whose habits are literary.' In the list of remedies to be sought in the mind itself, Mr. G. specifies the prosecution of Mathematics, as being a study singularly adapted to fix the thoughts; to remove our place of study from every object which is apt to seduce attention; and to cultivate with solicitude a habit of abstraction. To prevent fits of absence from becoming criminal, he directs us to the scriptural precept, "Keep your hearts with diligence;" and in order to break reveries which may be idle and unprofitable, he recommends that 'the study be hung round with the portraits of heroes and worthies; of ancient and modern authors; of those who have attained eminence or power by mental activity and perseverance, and are calculated to rouse the slumbering mind to emulation and energy.'—When it is considered how greatly literary pursuits are retarded by this frailty of mind, we ought to thank Mr. Grant for cautioning us against it, and for reminding us that this riot of fancy should be seldom and carefully indulged.

On the Moral Influence of History. By the Rev. G. Walker, F.R.S.—It has often been remarked that ideas of glory, excited by historians and poets, have been productive of the most pestiferous consequences. Owing to a want of that nice discrimination which is rarely possessed by the common reader, men are often misled by those who undertake to instruct them, and their judgment is vitiated by the fascinations of the Muse. A discriminating few have adverted to the errors which have been propagated by the most interesting class of writers: but no one has performed this task with more discernment, and with more irresistible force of language, than the ingenious author of this truly valuable essay. Mr. Walker may be said to have weighed History in the ballance of the Sanctuary, and, without detracting from her real merit, has correctly appreciated her immoral influence. In spite of the praise which has been lavished on her, and sanctioned by high authority, he ventures to dispute her claims, and to submit them to the test of close examination. He denies her right to be considered as 'eminently the instructress of morals;' and he adduces a host of facts and observations to substantiate his protest. We are desired to consider that 'history is but a very partial view of man,

of

of one class of man, and this the most vicious and depraved class; that it is generally the record of the vices and hardly at all of the virtues of man; and that as far as its information goes, we may be led to think infinitely worse of man than man deserves.' Mr. W. accounts for the high interest which History excites by the power of curiosity, and by that passion for the grand which is inherent in the human mind; and he contends that the object of the historian in writing is to gratify this thirst for knowlege, and this love of display. He does not attempt to conceal the important uses of history to the soldier, to the statesman, and to the philosopher; nor to take from it the praise of affording to man an important lesson on the magnitude of his powers, and on the unexhausted resources supplied by exertion, fortitude, and magnanimity: but he ventures to question whether the mass of mankind will derive from it these important advantages. The general subjects of history induce an erroneous belief that the vices of man preponderate over his virtues; for what is it but an exhibition of his follies, his crimes, and his misery? Mr. W. thus continues:

'Whether we take a retrospective view of past ages, or consult the present history of the world, what have we generally presented to our view, but one disgusting series of the heaviest calamities and the most shocking vices, that can afflict or degrade humanity! We hardly turn over a page, which is not crimsoned with blood, or polluted with foul crimes. Barbarous violence, sanguinary wars, horrid devastations, merciless persecutions, murders, rapes, poisons and assassinations, lordly tyrants trampling upon and insulting the rights of human nature, and abject slaves crouching beneath the yoke of a withering despotism, which from age to age has gone on debasing the human character, and blasting every rising effort of genius and virtue.—Such are the scenes which history chiefly exhibits to our view. To the reader, therefore, who looks perhaps solely for amusement, and with no view to any specific instruction or advantage, such a picture of the debasement and misery of his fellow creatures can afford no gratification. Where the heart is not strangely corrupted, its most natural impression must be that of pain and disgust. Who can peruse the bloody proscriptions of a Roman triumvirate, the devastating march of a Genchischan or a Tamerlane, the barbarities of a Mexican or Peruvian conquest, the systematic cold-blooded cruelties of a Spanish Inquisition, without the most painful emotions of indignation and abhorrence? The frequent contemplation of such scenes, in which human nature is so outraged, and yet few, if any, better specimens of human characters are exhibited, must have a strong tendency to corrupt the heart of the reader; to chill all the warm affections of his innocent youth, to induce a cold, illiberal and misanthropic spirit, or, as if all resistance to the general current were impotent, to reconcile him to a partnership in the selfishness and depravity of man. For, as the reader becomes more and more conversant with the continued tale of human folly and wickedness, his estimation

estimation of his species must be lowered, and his humane and benevolent principles impaired. It requires indeed a strong mind, and standing upon strong principles, such as the world will not teach him, to resist this most malignant of all impressions. Now and then indeed, it must be allowed that some characters arise, such as Alfred. —— What! does history pause at the mention of this single name, and in her lengthened catalogue of kings and legislators and boasted heroes, has she no fellow worthy to place beside thee? Then stand alone, thou glory of the British isle, and be thou alone, that verdant spot in the wide waste of an Arabian desert, on which the wearied and disgusted eye, can gaze with delight; and at the mention of thy name may the heart be warmed anew, and re-excited to every virtuous aspiring. But even thou, with all thy wonderful virtues, polished in the midst of barbarism, learned in the midst of ignorance, religious in the midst of superstition, and on a throne the father and the friend of thy people, art but as the bright meteor, which for a moment illuminates the dark face of night, and is soon obliterated and lost in the returning gloom.'

Recovering from this apostrophe to Alfred, the Essayist returns to his charge against history, and displays in a forcible manner the aggregate of immoral impression which it produces:

'The heroes of the historic pen have in general been the great destroyers of mankind; those who have ravaged kingdoms, overthrown empires, and thinned the human race. Men have been deified and sainted, not for the goodness, but for the greatness, of their exploits: not for their endeavours to civilize and improve the state of mankind by the introduction of mild and equitable laws, and the cultivation of the arts of peace; but for an inordinate and selfish spirit of ambition and aggrandisement. The reign of just and peaceful sovereigns, which, like the tranquil seasons of nature, impart health and life and chearfulness to every thing around, has been regarded as but an inferior and secondary object of their attention, valued perhaps most, as it renovates the energies of a nation, and fits it for the ambitious views of a military successor. No! it is the mighty troublers of the earth, the hurricanes of proud war and conquest which deform the fair face of nature, which in their wasteful progress sweep whole nations to the grave, that has been too much the theme of historic applause and admiration. When we behold the title of Great conferred on such men as Alexander, Cæsar, Lewis the XIVth, or even Peter of Muscovy, every moral and humane mind must reprobate the profanation of the attribute, and lament the folly of the world, which can join in the applause of what it ought severely to condemn, and dignify what merits its abhorrence and execration. But the common vulgar of mankind too easily adopt the very prejudices which are their ruin, and, caught with the whistling of a name, fall down before and worship the very beast that is to devour them. Thus, by the false colours in which such characters are exhibited, the moral judgment and the moral taste of many a reader is most deplorably perverted. If romances and novels have erred in raising the notion of human virtue above

above its level, history has more dangerously erred in the low appreciation of the human character, and associating it with every vice.

'From the heroes of antiquity have sprung the race of the wasteful conquerors of nations, the disturbers of the peace of man. Achilles begat Alexander and his turbulent successors; Alexander begat Julius Cæsar, with the long and horrid series of Roman Emperors; and the bewitchery of Cæsar's character will never cease to propagate the lust of overbearing dominion, without one end in view, but the mere fame of extended empire and despotic sway. To this we have owed the embryo attempt of Charles V. of Austria, and of Lewis XIV. of France; and at this moment owe, more perhaps than to any other cause, the present troubler of the world. An ample career of solid glory lay before him; but the ghost of Cæsar and the dream of more than Roman empire appear to haunt his sleeping and his waking hours; they have turned him from all honourable course, nor will suffer him to pause, until, to serve some wise ends of an avenging providence, he be permitted for a while to spread desolation around; or fall at once himself and his deluded country, a mighty ruin, a just but an inadequate atonement to an offended and harassed world.'

In conclusion, the author asks these questions:

'Is the exhibition of human character in history a fair representation of human nature? Is it the representation of man at all considered in the abstract? Is it not the portrait of a single class of men, who, from very obvious causes, are the most vicious and depraved of men? Considered as the picture of man, is it not a horrid and disgustful one? And yet, as history appears to treat of man in every age and nation, is it not by many considered to be the picture of human nature? Can this fail to have the most malignant effect, to break down the human mind, and reconcile it to vice as being in the order and course of human nature?'

We hope that the above observations will not only put the *readers* of history on their guard, but produce a salutary effect on its future *writers*.

Reflections on History and on Historians, ancient and modern. By John Holland.—In the preceding paper, Mr. Walker does not attempt to impeach the veracity of history, but Mr. Holland examines it in this ~~point of~~ view; and while he points out the circumstances which weaken our confidence in antient and modern relations, and the characteristic defects of their authors, he contends for the utility of history, in order to abate the force of the sweeping declamation of the President. He concludes with observing that

'Since history may teach both wisdom and virtue, and since it undoubtedly displays what progress men have made in improvement of various kinds, it may justly be termed the volume of providence, and may join with nature and divine revelation in proving that all things work together for good.'

On Natural and Moral Philosophy, and the proper Manner of Philosophizing in both. By the Rev. G. Walker, F.R.S.—We have perused this essay with much satisfaction, and we recommend it to the attention of the moral philosopher. Mr. Walker very judiciously advises that the same mode of philosophizing, which is adopted in physics, should be introduced in the study of morals. After having adverted to the fact in the material creation, that each fossil, plant, and animal, possesses certain innate discriminating properties, and that 'every individual of each animal species discovers a common character, common properties, performs common functions, and tends to a common end,' he proceeds to an examination of man, and asks very properly whether 'he alone is to be excepted from the general plan which is visible in all the works of nature? Has he alone no inherent constitution of mind, as well as body, adapted to and preparative of his specific character? Are not the elements of this, whatever it shall be, interwoven and coexistent with his very being?' The principle laid down is that mind in man has an elementary moral constitution. The analytical process pursued in establishing this fact is very forcible; and Mr. W. is of opinion that, if the same mode of reasoning be adopted in the science of mind and moral philosophy which is common in the study of the natural world, some favourite theories and doctrines would be perceived to be untenable. He asserts that the moral judgment decides independently of all considerations of general *utility* or *selfish* interest, in consequence of the inherent property of the human mind with which it was endowed by the Creator:

'That the useful should be the consequent, is nothing wonderful, when the whole is referred to the providence of the benevolent Creator. But it deserves consideration, that in many instances, the useful in the eye of the Creator neither is, nor can be, in the contemplation of man, being indeed beyond the reach of his ken; and that, even with the best intentions, man often entertains very erroneous conceptions of utility. It is, indeed, a most fortunate truth, that our judgment of the moral is much more correct than our judgment of the useful.'

Of the advocates of the *Selfish system*, he asks; 'Are no moral verdicts recorded, where the subject on which the sentence passes, can hardly by any ingenuity be brought home to self; or if it can, where the advantage to self is so remote and involved in so many chances, that it can hardly be deemed to weigh a feather in the scale?'

In this short essay, the argument is ably pursued, and the conclusion appears to be irresistable.

We must not close our notice of this volume without observing that it is more valuable than its bulk might indicate, and is very creditable to the Society from which it proceeds.

ART.

from p. 362.
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see p. 362.

ART. III. *The Topography of Troy, and its Vicinity*; illustrated and explained by Drawings and Descriptions. By W. Gell, Esq. of Jesus College, M.A. F.A.S, and late Fellow of Emmanuel College, Cambridge. Folio. 10l. 10s. Boards. Longman and Co. 1804.

A REASON, which appeared to us to be cogent, has hitherto induced us to delay our report of the highly ornamented and very expensive volume now before us. Far advanced "in the vale of years," we cannot undertake to visit the regions of Phrygia minor, in order to indulge a curiosity which we applaud in the more youthful and more wealthy: but, though disabled from deciding on the exact correspondence of the locality of modern Bounarbashi with antient Troy by a personal survey, the opinions and descriptions of others, who have been actual investigators of that classic ground, demand our notice, and call for a due appreciation of their plausibility and weight. Several English Gentlemen are yet living, who have surveyed the country; and a re-perusal of their publications, since the Trojan question has agitated the learned world, as well as conversation respecting this subject with others, has required much of the leisure which we have taken on the present occasion.

Mr. Gell opens his work with great pretensions to original information, and seems not sufficiently to remember how lately the same ground had been traversed before him:

'I had been accustomed, during a long voyage in the Levant, to sketch every scene which was remarkable for singularity of feature, or as the theatre of events recorded in history, and I was prepared with copious notes, *from every work antient and modern*, which tended to illustrate the history or topography of the country, while I examined every interesting spot, with a delight increasing as the truth and consistency of the Iliad became more and more apparent.

'In approaching the Troad, each bay, mountain, and promontory, presented something new to the eye, and excited the most agreeable reflections in the mind—so that in a few days, I found myself in possession of a number of observations and drawings, taken in a part of the world concerning which, although much has been written, there still existed a great deficiency of those materials which might enable the reader to form a satisfactory opinion, without encountering the difficulties of a tedious voyage. I thought that such information would gratify men of literature and inquiry.—I was confident that delineations and descriptions of a fertile plain, watered by abundant and perennial streams, affording almost impregnable positions, and so situated as to command one of the most important passes in the world, must be interesting, not so say valuable, to politicians and statesmen. It is perhaps unnecessary to add, that I was not without the hope of convincing others, as I had been myself convinced, that the history, as related by Homer, is confirmed by the fullest testimony, which a perfect correspondence between the present face of the country and the description of the poet can possibly give to it.

'To attempt elegance of style in a work of mere description would be so much out of place, that I am persuaded an apology will not be required for such imperfections of language as may be found in this volume. I am well aware, that my anxiety to give the reader a thorough knowlege of the country may in some cases have led me into useless repetitions, while in others the mention of many particulars may be omitted, which I have falsely imagined were generally known. In regard to the plates, I can truly aver that they are accurate copies of faithful drawings made by myself on the spot; and I think I am justified in observing, that those who are interested in the subject, by a careful examination of them, may acquire as clear a conception of the plain and its environs, as a traveller who is not a draughtsman could obtain in the country itself. In the description of the plates, I have confined myself for the most part to the single object of illustrating the topography of the Iliad; yet, as the relation of the few occurrences we met with during our short journey may not be entirely uninteresting to some of my readers, I have not omitted to insert it.'

Many dramas have been crowded with action disproportioned to the time employed. What shall we say of the Hero of that which is now presented to us, who, in the month of December, paced over the whole Troad from Alexandria to Bounàrbashi, and thence to Koumkalèh, in one short day; and, in a second, made a complete circuit of the lower division of the Plain of Troy? In this limited space, he took *twenty-six* views, (a few of which are twice the length of the Folio that contains them,) and corrected two maps or topographical sketches, having deemed the four or five, which are already before the public, not sufficiently accurate. He then sailed up the Hellespont to Constantinople, but on his return delineated the whole line of the southern coast from Cape Baba (Lectum) to Alexandria Troas.

Professing ourselves to be firm in the opinion which we have asserted concerning the Trojan controversy, and Mr. Gell having made this rapid tour with the intention of corroborating sentiments consonant with our own, we are, as far as would become us, biassed in his favour. His publication is splendid; and we have been assured, by those who inspected the subjects of his pencil rather longer than he confesses to have done (*terque quaterque*), that the outline is minutely correct; that the general resemblance to the places is very superior to any graphical attempts hitherto given to the world, in books which treat of the Troad; and that they very pleasingly recall the scenes of that country. The views taken by the ill-fated Mercati for Mr. Morritt and Mr. Dallaway have been copied with acknowlegement, by Mons. Chevalier, in his *Atlas du Voyage de la Troade.* It may be allowed that the style of drawing which is taught in military

military academies, to enable an engineer to take away with him (*currente calamo*) all the leading features of a country in his *Portefeuille*, is still better adapted to these subjects, in particular, than that which is denominated "picturesque" by Mr. Gilpin, and at Somerset House; and which in most instances implies a want of fidelity, or that the true portrait may be sacrificed to the rules of art. Ochre and verdegris may sufficiently mark out a line of coast: but, in the near view of a landscape, much more is required, if a very raw effect is to be avoided. We are told, likewise, that such is not the tone of colouring of the aerial perspective, nor of the foliage and foregrounds in Asia Minor.

In our account of this volume, we shall not again review the whole of this question, nor minutely consider all the points which relate to it as confirming or as inconsistent with the details of Homer's descriptions: but we shall pay attention to those parts which seem to communicate more than has yet been imparted, in order to substantiate conjecture; comparing them with the statements of other investigators, most of whom are totally unnoticed by the present author.

Mr. Gell entered Turkey from the Adriatic, and without having much considered the Mohammedan character, if we may judge from the two adventures which he relates:

'As we advanced, (he says,) the common duties of an English morning toilette attracted the notice of our Turkish conductors; who, surprized at seeing us perform our ablutions with a scrupulousness worthy of Mussulmen, expressed the greatest satisfaction, and one of them spred his cloak as a carpet for us to sit upon. The ceremony of the tooth-brush did not excite less astonishment, for they had no idea that there existed Christians of any nation, who thought washing an indispensable duty.'

Having then informed us, as Chevalier, Francklin, and others, have before particularly mentioned, that the hot and cold sources of the Scamander are now, as in Homer's days, used by washerwomen, he proceeds to recount the confidence and hospitality of the Kiayàh, whom all the late English travellers unite to praise:

'While the preparations were going on, we observed that the room was scarcely of a size sufficient to allow of our sleeping comfortably; and seeing a door fastened only by a leathern thong wound round a nail, we entered with our interpreter the room into which it opened, with an intention of discovering another apartment, in which we might pass the night. The house being very large, we found several good rooms, painted in lively colours, and at last fixed upon one which we thought more comfortable than the rest; but as the whole were fitted up in a style we had not before seen, we proceeded, on our return, into a kind of hall near the centre, to examine the other

wing, beginning by opening a door with a key we found in the lock. As we advanced with only a single lamp, we heard the sound of laughter, and the footsteps of persons retreating from us. I do not know how it happened that we did not recollect that we were in the apartments of the women, for had we done so, regard both for propriety and personal safety would have suggested the necessity of retreating: but we examined the place with some composure, and we penetrated even into a chamber which the females had that moment quitted on our approach. The room was surrounded with a handsome divan sofa, and on the floor were many cushions, on which the Ladies had been sitting before a good fire. From the four corners of the room, as many ropes covered with red cloth served to suspend in the centre a small cradle, much like those used in England: but there was no child in it when we entered. We began, however, at length to suspect that we were not in our proper situation, and returned to our room, when we found the Aga himself advancing to meet us, pale with rage, and his lips quivering with such violence that he could scarcely speak. I told the Greek servant, who spoke Turkish, to ask him whether we could not have another room, on which he turned away without speaking. The dragoman began to commiserate his situation, as he would become the scorn of every body for suffering the intrusion of strangers into his harem. In the course of the evening, we sent to inform him what was the truth, that we had only been in search of another chamber, being totally ignorant of the use of those apartments. He was so well satisfied with our message, that he shortly after made his appearance with a large water-melon, which he begged us to accept; and thus terminated an affair which might have been productive of serious consequences to our party, if the Aga had not been a rational man.'

Mr. G. says that, after this kind reception, 'the Aga (*Kiayàh*) seemed much pleased with the present of a sequin of the value of ten shillings at our departure; but had the real Aga of Bounarbashi been at home, we should have probably been lodged and accommodated without reward, as he is a rich man, and a Hadjee of a very hospitable disposition.' Had Mr. Gell consulted his predecessors respecting the meaning of the word Hadji, he might have learned that the mere act of visiting Mecca as a Pilgrim has little connection with moral qualities.—Early in the morning, Mr. Gell ascended the Pergama of Priam; where he discovered 'foundations of walls and perhaps of temples;' and on the citadel he remarked the 'foundation of a thick wall,' and that a surrounding wall may be traced in almost every part. The xxxvth Plate exhibits 'foundations yet discernible, very similar to those which are acknowledged ruins of the Temple of Venus on the road from Athens to Eleusis;' and others are described in Plates xxxvii and xl. and, as it is said, 'without exaggeration or addition.'—The quotation of "*etiam periêre ruinæ*" will not be found in Virgil,

Virgil, as it is used in p. 98, but in Lucan, Pharsal. L. ix. v. 969. Now in what manner do the investigations of other travellers coincide with these very ample discoveries? M. Chevalier, to whom the original idea of fixing the site of the city of Troy at Bounarbashi is unquestionably due, speaks thus cautiously: "The substance of which these hills are formed (meaning those which rise immediately behind the village) is a sort of pudding stone, which at first sight has quite the appearance of masonry. The pieces of which it consists are fastened together by a sort of cement of a reddish colour, and nature hath so exactly imitated art on this occasion, that a very minute degree of observation is requisite for detecting the deception." (*Description of the Plain of Troy*, translated by A. Dalzel, M.A. &c. 4to. 1791, p. 25.) When arrived at the summit or acropolis, he "distinguished foundations of ancient buildings, the masonry of which had assumed the consistence of the rock itself:" p. 29. Mr. Dallaway, who accompanied Mr. Morritt in 1795, mentions that the hill, in its ascent to the highest point, "was thickly strewn with loose stones;" and he observes in general, "that the face of the country exhibited nothing worthy of remark," that "bushes and large *unhewn* stones only are to be seen," and "that there is a mural rock as compact and regular as the remaining walls of Constantinople, completing a fortification rendered impregnable by nature, which would account for a ten years siege, and the superlative epithet of walls built by the Gods themselves." (*Constantin. Anc. and Mod.* pp. 345, 346.) In a second visit, he saw nothing that was calculated to alter his opinion as to any architectural remains.—In the year immediately preceding, Dr. John Sibthorp, the late Professor of Botany at Oxford, and John Hawkins, Esq., a gentleman well known in literary societies, visited this celebrated spot; and hence they each sent a letter to Rob. Liston, Esq., at that time our Ambassador to the Porte, which letters were published by Prof. Dalzel in the 4th Volume of the Transactions of the Royal Society at Edinburgh. Mr. Hawkins says, "Chevalier has certainly pitched upon a place for the site of old Troy which has much natural strength to recommend it, particularly the easternmost angle of the hill, which, from its height above the Simois, must have been considered as a very strong *natural* fastness, in those times of warfare." (p. 85.)—Dr. Sibthorp speaks still more decidedly with respect to any vestige of the original city: "Troy and its temples (says he) have been so completely rased, that not a column, nor even a stone that has *been used in architecture*, remains to tell its site; and it is from tumuli only, with their relative situation to the Simoeis and

Scamander, that we are to learn where it once stood." p. 86.—Mr. Morritt was more in favour of artificial appearances than his fellow traveller; and he remarks (*Vindication of Homer*, p. 100) "Yet, in the hill of Bounar-bushi, *traces* of building and inequalities of ground do remain; and since Mr. Bryant has told us what he should expect, he must acknowledge that Troy might exist here, for if he visited the spot, he would find his expectation answered. The situation assigned by M. Chevalier has evidently been built upon, the earth is cut into platforms, and when I considered that these were the foundations of ancient Troy, I wondered then that so much remained though Mr. Bryant is disappointed at finding so little."

Such is the evidence as to whether there is or is not any ocular demonstration of the ruins of Troy. Mr. Gell may have possessed a happier genius for investigation; and he may have taken all the pains which his short survey could have permitted: but the testimony of his precursors is not in favour of his extraordinary discoveries. Conjecture is not available in the decision of this question; and he may recollect a very early axiom in Logic, "*qui nimis probat, nihil probat.*"—Even the discovery of a temple is not due to him as far as imagination is concerned, since it was first suggested by Captain Francklin, in his *Remarks and Observations on the Plain of Troy*, p. 21. 4to. 1800.

One or two leading points are principally maintained by those who favour the identification of Troy, and reject the heresies of Mr. Bryant concerning that subject; and here let us see what new confirmation has been given by Mr. Gell's researches. Respecting the discovery of the bronze figure of Minerva in a tumulus near Yenicheyr, first announced (with great confidence) by M. Chevalier, we have a distinct narration given in Dallaway's *Constantinople*, pp. 351, 352.—Mr. Hawkins says, in his letter to Mr. Liston (April 1795), "At Athens we fell in with M. Fauval, who assured us that M. Chevalier's account of the goblet discovered in the tomb of Achilles is *perfectly fabulous*. It originated, it seems, from the fragments of a small *bronze* figure, which, when he had cleaned and put together, proved to be a very curious image of Minerva." (Dalzel's Memoir, p. 89.) A plate of this bronze is given in Chevalier's Atlas, No. xxiii.—Mr. Gell, in a long note, p. 67, informs us 'that the figure of *a man*, whose feet rested upon the backs of two small horses, was discovered;' and he adds that 'in his own inquiries he could never procure any satisfactory account of these relics.'

The artificial Canal, by which the waters of the Scamander are conducted under the hill on which the village of Erkisse Keuy is now placed, is marked in Chevalier's Map given by *Dalzel*,

Dalzel, and in that since published by himself in his Atlas, as "*canal moderne.*"—Mr. Morritt considers it as the "*Amnis navigabilis*," mentioned in Pliny's itinerary, Nat. Hist. L. v. cap. 30. (*Vindication*, p. 112.)—Captain Francklin, having learned that it was either *opened again* or *made* by the famous Hassan Pasha about sixty years ago, attributes it *solely* to that great Admiral, who had a country residence very near it, in the map of the Troad prefixed to his *Remarks*.—We gain no farther information from Mr. Gell, who adopts the *amnis navigabilis* in his beautifully executed map, than 'that the Canal has reduced the Scamander, before its junction with the Simoeis, to a mere brook.' p. 116.

The total number of plates and maps in this volume is forty-five; and to each is prefixed a verbal description, into which are inserted various arguments, partly derived from the author's own pen, and partly collected from the controversy of Bryant and Morritt, published before this journey was undertaken, and dovetailed, with some dexterity, into the body of the narrative.

Nothing can be farther from our intention than, by departing in certain instances from the voice of unqualified praise, to damp the classical ardour of our young gentlemen of rank and fortune. We consider these pursuits as highly creditable to Mr. Morritt, to Mr. Gell, and to the English character; and we decidely approve of time so much more reputably spent than in the luxurious and enervating capitals of foreign nations, too frequently preferred by our countrymen: but, in the republic of letters, we shall freely animadvert on *aristocracy of price*, as unfavourable to the general cause of literature, and on any endeavour to exclude preceding adventurers from the credit which they have gained in the same career.

Dall.Y

Art. IV. *The Life of Sir Walter Ralegh, Knight.* By Arthur Cayley jun. Esq. Second Edition *. 2 Vols. 8vo. 1l. 1s. Boards. Cadell and Davies. 1806.

One of the leading advantages, to be derived from writing the life of an eminent individual, is the opportunity which it affords of introducing its readers to a more intimate acquaintance with the pursuits, the manners, and the temper of the age in which that person has figured, than can be obtained from general history. When we sit down to the memoirs of Sir Walter Ralegh, we feel as it were in waiting to

* The first edition is printed in 4to. price 1l. 16s.

be shewn into the penetralia of a most vigilant, efficient, and wise government, which secured prosperity at home and success abroad; we anticipate free and familiar converse with a sovereign equally intrepid and discreet, who knew how alternately to employ authority and management, vigour and pliancy, as circumstances required;—and with statesmen renowned for valour and enterprize, of the first eminence in the several ranges of the human intellect. The hero, moreover, is worthy of the age, and is himself a striking and splendid object; he reminds us more of the illustrious characters among the antients, than almost any other man of modern times; since few united in the same degree an active career with contemplative pursuits, military with civil qualifications, and consummate experience in the naval with signal distinction in the land service. Even to this day, also, many parts of his conduct remain an enigma, and a fair estimate and full delineation of his character still continue to be desiderata.—It will be obvious, then, that we are not of opinion that his history forms a fit subject for the first essay of a literary tyro; on the contrary, it challenges in our judgment the pen of a veteran of Parnassus, and should be undertaken only by one who had employed years in the study of the period, to whom all its records, monuments, and documents were familiar. The want of materials, when alleged by a novice, does not gain ready and full credence, and will not pass as a sufficient apology for a spare and meagre narrative.

Mr. Cayley informs us that the leisure, which he occasionally obtains from avocations of superior claim, has here been employed in collecting and arranging the scattered parts of Sir Walter's story. We cannot refrain from observing that, for even a tolerable execution of this task, 'occasional leisure' was not likely to suffice:—as to his avocations, they may have a claim on him personally superior to that which these researches can prefer, but when he makes the public a party to them, it becomes his indispensible duty to spare no means within his reach, in order duly to pursue them; and we cannot admit that any avocations form an excuse for *remissness* in this respect, though they might justify a total relinquishment of the design. Unsuccessful attempts of this kind, indeed, are both mischievous to letters and prejudicial to the individual; whose failure as an author tends to rob him of the consideration which he might have enjoyed as a well informed and intelligent man.—The circumstances of the case have induced us to make these general observations, before we proceed to the details of the present volumes. We must now attend more particularly to their

contents; and the reader will thence perceive the application of our remarks to Mr. Cayley's performance.

It will be observed that Mr. Cayley omits the *i* in the Knight's name, and spells it Ralegh; because it is, he says, so written by Sir Walter himself in all those of his letters which have been preserved. Some authors have claimed, in favour of the Ralegh family, an affinity with elevated houses, and even with royal blood, while this distinction is as confidently denied to it by others: but it is beyond all doubt that it was antient and highly respectable, though at the time of Sir Walter's birth it appears to have been on the decline. We are informed that his father, Walter Ralegh Esq. of Fardel, in the parish of Cornwood, near Plymouth, was three times married, and had children by each wife.

'By his third wife Catharine, daughter of Sir Philip Champernon, of Modbury, and relict of Otho Gilbert, Esq. of Compton, in Devonshire, he had issue, Carew, Walter, and Margaret, Carew, afterward knighted, and of Wiltshire, married Dorothy, daughter of Sir William Wrougton, and relict of Sir John Thynn; by whom he had issue. Walter, the fourth son, is the celebrated subject of these memoirs, and thus appears to have been maternal half brother to the eminent knights Sir John, Sir Humphrey, and Sir Adrian Gilbert.'—

'Having the remainder of an eighty-years lease of a farm called Hayes, in the parish of Budley, near that part of Devonshire where the Otter river discharges itself into the English channel, Mr. Ralegh resided on this farm during his last marriage. Thus Hayes became the birth-place of Sir Walter, and is distinguished at this day by topographers, as more remarkable for that circumstance than for any other. On the expiration of the lease, the estate devolved to a Mr. Duke of Otterton, to whom Sir Walter applied without success as a purchaser. In his letter to Mr. Duke on this occasion, he writes, *for the natural disposition I have to the place, being born in that house, I had rather seat myself there than anywhere else.*'

The birth of the subject of these volumes is conjectured to have taken place in 1552: but 'of his childhood,' says this writer, 'not an anecdote has been preserved; and we are even unacquainted where he received his school education.' That he studied some time at Oxford is clear from the testimony of Hooker, but of the duration of his residence there we have no account. It is properly remarked by Mr. Cayley that

'Ralegh had the advantage of a period of unusual political activity to exercise and encourage his genius at his entrance into life. The glorious reign of our illustrious Elizabeth, less distinguished by its length, than by the vigour and success of her government, amid almost unexampled difficulties at home and abroad, and by the variety of important events occurring in the course of it, commenced in the seventh year of his age. The early part of it was employed in changing the odious scenes of persecution which the reign of her predecessor had exhibited,

exhibited, and in promoting, with the soundest policy, the great work of the reformation. When, at a later period, France became involved in civil war, Elizabeth, to avert a threatened danger from the encroaching power of Spain, aided the distressed and humble states of Holland.'—

'The Queen, also, was not wanting in commiseration and assistance to the persecuted protestants of France. Having made use of her influence with other princes of the same persuasion, in promoting the cause, she accepted a pledge of jewels against a loan of money to the queen of Navarre, and permitted Henry Champernon, a relative by marriage to the earl of Montgomery, to march into France with a select troop of well equipped volunteers, one hundred in number, and all gentlemen. *Let valour decide the contest*, streamed on their standard. In the list were Philip Butshid, Francis Barcley, and Walter Ralegh; the two first afterward men of note; the last the most distinguished of them all, then a youth, and commencing his career.

'This select troop of horse arrived in the French camp in October 1569 (the beginning of the third civil war), and was received with great distinction by the queen of Navarre and the princes. Although the French writers, as well as our own, leave us in the dark as to its particular services in France, or the time of its continuance there, we may conclude that Ralegh gained considerable reputation in that country. Hooker says,—*he spent good part of his youth in wars and martial services there;* and another writer, who seems also to have known him, adds, speaking of his education,—*it was not part, but wholly gentleman, wholly soldier.* From these circumstances, we may not only account for the chasm which we find about this period in all the memoirs of Sir Walter's life, but may also presume, that, viewing the extensive and instructive scene of extraordinary events which their political theatre at this time exhibited, he was initiated by this (then) polite, warlike, and diplomatic, people in those civil and military accomplishments which he afterward so conspicuously displayed.

'Ralegh was still in France after the death of Charles IX, an event which took place about five years after his arrival in that kingdom; and as this interval embraces nearly thirty battles, sieges, treaties, and capitulations, the school must of necessity have proved a fine one for the initiation of our young volunteer. In his History of the World he has bequeathed us the following memorandum of this period.—*I remember it well that when the prince of Condy was slain, after the battle of Jarnac, (which prince together with the admiral Chastillon, had the conduct of the protestant army), the protestants did greatly bewail the loss of the said prince, in respect of his religion, person, and birth; yet, comforting themselves, they thought it rather an advancement, than an hinderance, to their affairs: for so much did the valour of the one outreach the advisedness of the other, as whatsoever the admiral intended to win, by attending the advantage, the prince adventured to lose, by being over-confident in his own courage.*

'By what means Ralegh escaped the horrible massacre of Paris and the provinces, on the evening of St. Bartholomew, 1572, we are left in uncertainty. It is probable, however, that he found refuge in the ambassador Walsingham's house, in company with Lord Wharton, young Sidney, and others.'

In

In the adventurous part of Sir Walter's history, we are sorry to meet so many proofs of a hard and unfeeling heart. He appears on many occasions, especially during his campaigns in Ireland, to have taken away the lives of men with little cause; and though in some instances he may have been only the instrument, he does not seem to have been an unwilling agent.

From the time at which the knight became a public character, the narrative before us contains very little that is not to be found in the general histories of the period. We do not therefore feel ourselves required to follow it through its several stages: but we shall advert to a few particular passages.

It appears that on a subject of high importance, which had then been little considered, Sir Walter had more enlightened and just views than many senators of our own time, when the matter may be seen in full day-light, if men will only take the trouble of keeping their eyes open. We fully join in the praise bestowed by his biographer on the speech which he made in Parliament, in opposition to the act for sowing hemp:

'For my part,' said he, 'I do not like this constraining of men to manure or use their grounds at our wills, but rather let every man use his ground to that which it is most fit for, and therein use his own discretion. For hawsers, cables, cordage, and the like, we have plentifully enough from foreign nations, and we have divers countries here in England make thereof in great abundance; and the bill of tillage may be a sufficient motive to us in this case, not to take the course that this bill intendeth. For where the law provideth that every man must plough the third part of his land, I know it, divers poor people have done so to avoid the penalty of the statute, when their abilities have been so poor, that they have not been able to buy seedcorn to sow it withal, nay they have been fain to hire others to plough it; which if it had been unploughed, would have been good pasture for beasts, or might have been converted to other good uses.'—

'Sir Walter's remarks, on the renewal of the debate, whether the statute of tillage should be repealed or not, may be recommended to those of our modern legislators, who imagine, that the prosperity of agriculture may be promoted by parliamentary interference. 'I think,' he said 'this law fit to be repealed. For many poor men are not able to find seed to sow so much ground as they are bound to plough, which they must do or incur the penalty of the statute. Beside, all nations abound with corn. France offered the queen to serve Ireland with corn at sixteen shillings a quarter, which is but two shilling a bushel. If we should sell it so here, the ploughman would be beggared. The Low countryman and the Hollander, who never sow corn, hath by his industry such plenty, that they will serve other nations. The Spaniard, who often wanteth corn, had we never so much plenty, would never be beholden to the Englishman for it, neither to the Low-country nor to France, but will fetch it even of the very barbarian. And that which the barbarian hath been suing for

for these two hundred years (I mean for traffic of corn into Spain) this king in policy hath set at liberty of himself, because he will not be beholden unto other nations. And therefore, I think the best course is, to set it at liberty and leave every man free, which is the desire of a true Englishman.'

Many persons who are so constructed as to be incapable of judging of positions which are supported by just reasoning, or who regard them on that very account with suspicion, may be disposed to defer to the suggestions of good sense, when they find that they have fallen from the mouth of one of the ablest men in the reign of our great Queen. It is for the benefit of such persons that we have inserted the preceding extracts.

The same enlightened spirit displayed itself in his last speech, on the subject of the bill for enforcing the more diligent observance of the Sabbath:

'Here he shewed that all the churchwardens of every shire must come to the assizes to give information to the grand jury. 'Say then, there be an hundred and twenty parishes in a shire, there must now come extraordinarily two hundred and forty churchwardens. And say, that but two in a parish offend in a quarter of a year, that makes four hundred and eighty persons with the offenders to appear. What great multitudes this will bring together! What quarrelling and danger may happen! Beside, giving authority to a mean churchwarden, how prejudicial this may be! With divers other reasons against it. As also he said there were some ambiguities and equivocations therein; the *proviso* newly added being a plain toleration from coming to church, and that the parson could not prevent or constrain any if they read service at home.'

To the character here given of Ralegh's great work, the History of the World, we think that little can be objected:

'It was published in the year 1614; and the eleventh and last edition, which is the best, was edited by Oldys, in folio, in 1736. Beginning with the creation, Sir Walter has, in this work, given us the flower of recorded story to the end of the second Macedonian war; and having reviewed the three first monarchies of the world, he leaves Rome triumphant in the fourth, about a century and a half before the birth of our Saviour, comprehending a period of nearly 4000 years. Ranking in that class of historians who prefer the exercise of judgment in selection to that of genius in adorning, his industry and penetration are highly conspicuous, and his stile is the best model of his age. His superior manner of treating Greek and Roman story, has justly excited regret that he has devoted so many pages to Jewish and Rabbinical learning, and that he has not permitted himself a greater latitude in those more fascinating subjects. If, in this great work, he has, to use the words of an eminent critic, *produced an historical dissertation, but seldom risen to the majesty of history*, still the variety of its learning, and the elegance of its stile, are sufficient

cient to secure him a distinguished rank among the benefactors to our literature.'

The subject of Sir Walter's religious opinions is by no means neatly and satisfactorily investigated. That he was innocent of the charge of atheism no one can doubt: but Osborn admits that he had ventured to tack about and sail aloof from the beaten track of the schools; and Sir John Harrington says, speaking of him, "I know he doth somewhat differ in opinion from some others:" but how far he deviated from received opinions has never been well ascertained, and perhaps cannot be learned at this day.

We fully subscribe to the opinion of others in acquitting Ralegh of the conspiracy, of which, to the eternal infamy of the commission and the jury that tried him, he was found guilty, and which was afterward made the pretence for taking away his life: but we still conceive that the transaction admits of being more fully elucidated than it has been by Dr. Willwood. In none of the unfaithful relations which disfigure this part of the able and eloquent history of Mr. Hume, do his representations approach more to wilful disingenuousness, than in that which details the catastrophe of Sir Walter Raleigh.

Mr. Cayley has stated in his preface 'that he was induced to hope that a simple unadorned narrative, (the only one for which he had capability, leisure, or inclination,) would be no disparagement to his work.' It is greatly to be wished that he had reduced this capability into a faculty; in which case, bald as the tale is, it would have had at least one charm to recommend it. If the biographer is to be understood as intimating that less leisure is requisite in order to attain an unadorned style than one that is splendid, we must be allowed to question his knowlege of style in general, and of the simple species of it in particular. Between rude and inartificial writing, and a style of true simplicity, the distance is immense; the gorgeous stands in the middle between these extremes; and no one can be master of the simple except he has passed to it through the splendid. The genuine simple, we conceive, is the splendid mellowed down by just feelings and nice taste. In the progress of the student towards a happy imitation of the papers of Addison, he will, if our notion is correct, be able successfully to copy the style of the Rambler.

'*Once for all*,' continues Mr. C., in the same preface, 'I beg leave to remark that I write for such readers only as wish a book to be as complete in itself, without reference to others, as possible; and who will desire the fullest information I can afford them relative to my hero.' This is the reason assigned by the author, for employing more than a third of the letter-

press

press of these volumes on documents, most of which were before in the possession of the public, and a great part of which serves in no degree to elucidate the subject under consideration. On the canon here laid down, the life of a statesman ought to contain all the conferences in which he had ever taken a part, all the treaties which he had ever concluded, all the speeches which he ever delivered, and all the statutes which he ever procured to be enacted. We certainly profess to rank among those who desire the fullest information relative to the hero of a production of this nature: but we own that we were ignorant, till the present moment, that this end was to be attained by collecting together a large mass of narratives, memorials, and letters, in order to insert a portion of them in the body of the work, and to place the remainder at the close of it. We are willing to ascribe this conduct to the author's want of judgment, but we cannot help observing that it operates in effect as a deception on the public.

Jo.

ART. V. *Letters from Paraguay:* describing the Settlements of Monte Video and Buenos Ayres; the Presidencies of Rioja Minor, Nombre de Dios, St. Mary and St. John, &c. &c. With the Manners, Customs, Religious Ceremonies, &c. of the Inhabitants. Written during a Residence of Seventeen Months in that Country. By John Constanse Davie, Esq. 8vo. pp. 300. 5s. Boards. Robinson. 1805.

THE writer of these letters appears to have indulged his roaming propensities, chiefly with the view of soothing a tender disappointment. He embarked first for America; and after he had resided some time at New York, he determined to proceed to *Botany Bay:* having previously, at the earnest solicitation of his speculating friends in the land of Traders, provided himself with a quantity of *old clothes;* on which, according to American calculation, he would realize a profit of *cent. per cent.* In the latitude of Rio Janeiro, however, the vessel in which he had embarked was overtaken by a tremendous storm, and forced to make for *Monte Video,* the first safe harbour in the river of Plata. The accounts of the prodigious width of this river, Mr. D. found, were not exaggerated; though its depth is by no means proportioned to its length and breadth, and its navigation is rendered precarious by large sand banks, dispersed in various directions. The country, for many hundred miles round, is a monotonous plain, very deficient in native woods, and presenting no eminence but Mount Video, which figures like a solitary rock in the midst of the ocean.

Mr.

Mr. Davie's state of health had been materially affected at sea: but here his disorder was declared to be the *faitfa*; which, in these latitudes, is epidemical, and often proves fatal to Europeans. The ordinary symptoms are pains in the limbs, difficulty of respiration, tenseness of the eyes, and black spots on the roots of the nails. The old man, whom the governor of the fort sent to visit him, prescribed bleeding.

'To this,' says Mr. D., 'I consented, and he performed the operation in a very dexterous manner; not with a lancet, as our surgeons do, but with an Indian instrument very curiously made. It is a small and remarkably sharp flint, ground to an almost imperceptible point, and set in a small bit of ebony or cedar, in much the same manner as our glaziers' diamonds; with this difference—as theirs is placed perpendicularly in the wood, so this is set horizontally, with as much of the flint projecting as is sufficient to make the incision. The arm is bound up as with us; the instrument is then laid on the vein, and struck with a kind of small hammer; the blood flows copiously: and so skilful are the Indian surgeons, that the patient runs no hazard of having the artery injured by this peculiar mode of bleeding.'

This operation, however, prevented not the approach of fever and insanity; and the patient passed three months under the assiduous cares of the Fathers of St. Dominic at Buenos Ayres, before a complete cure was effected. In that part of the world, the priests are the only Europeans who profess any skill in medicine; and this knowlege is chiefly limited to the properties of a great variety of simples, which, in the hands of an able botanist, are found to counteract the noxious qualities of the waters of the Plata.

On recovering his reason, Mr. Davie learned, without much discomposure, that he was detained as a prisoner by an order of the government. With the Dominican fathers, he passed for a pious catholic, from the circumstance of his kissing with transport a cross which had belonged, we are to presume, to the object of his affection. 'I was about,' he says, 'to undeceive the father, and assure him I was no pious Catholic, but a miserable heretic, when a thought struck me, that the error he was in respecting my religion was a very fortunate circumstance, and with a little contrivance might be made to answer more purposes than one in my behalf. I therefore very devoutly acquiesced in all he said to me; and as I look upon all externals in religion to be matter of no importance, so I trouble my head but little about what they may require of me, in consequence of my supposed belief.' Let casuists reconcile such conduct with the principles of truth and virtue, if they can. Indifference about modes and forms of worship can never, in our apprehension, justify the prolongation of imposition and deceit. We likewise suspect that, in the present instance, the

assumption of a fictitious character defeated, in some manner, the ends which it was intended to serve; and that the traveller might have procured more abundant and more diversified information, if he had not subjected himself to the trammels and the dull routine of the cloister. The description of processions, however pompous, and details of the proceedings of Dominican monks, however faithful, cannot greatly interest the intelligent and curious reader. Yet many of the writer's pages are occupied with matters of this description; and it is only *en passant* that we collect a few particulars relative to the countries which are washed by the Plata. We gather, for example, from various detached passages, that the waters of this river deposit a fertilizing sediment; that they are artificially distributed among the gardens and cultivated grounds; that they contain the gold fish in great abundance; and that their banks are frequented by humming birds, parrots, and monkeys. The inhabitants of Buenos Ayres are represented as abandoned to pleasure, superstition, dirt, and laziness.—Various reflections are introduced on the feeble and tyrannical deportment of the Spaniards; and on the facility with which Paraguay or Chili might be wrested from them by the English, and the harassed natives restored to a comfortable state of existence.

Having at length succeeded in procuring an appointment to attend Father Hernandez on a missionary visit to *Rioja Minor*, on the banks of the great river *Uraguay*, Mr. Davie waited with impatience for the cessation of the annual rains, which are very violent, and attended with dreadful thunder storms. One of these last is thus described:

'During vespers last evening a tremendous storm came on, and the chapel was illuminated with double the number of candles used at prayers; but we had little reason for doing so, for in one moment the whole place seemed one sheet of liquid fire, which played with apparent wantonness round the image of the Virgin, which had been set up, with a vast deal of ceremony, about two hours before, that the fathers might supplicate her, should occasion require her services; which, as they pre-imagined, actually was the case. They therefore, as the storm increased, fell down upon their knees at her feet, and with earnest supplications implored her and saint Dominic to take their house and themselves under their protection. But, though they prayed and sung most devoutly and with all their might, the mother of God and the canonised Dominic remained deaf to all their entreaties: and what aggravated the matter was, that a tree which grew close to the east end of the chapel, and had been in a tottering condition for some time, fell down at the moment when the fathers' devotion was at its height, and, woeful to relate, dashed its branches through the chapel window, and sacrilegiously threw down the blessed Virgin herself, with all her glittering paraphernalia; and even the image of St. Dominic, a venerable old figure, had part of his nose

and

and one of his hands knocked off. At this dreadful catastrophe the whole community arose as with one consent, and fairly took to their heels across the court yard, leaving the holy lady prostrate before the shrine of St. Dominic. I ran with the rest; but I happened to be one of those usually in all foot races consigned to the devil—I mean the hindmost. The pampero blew like a Jamaica tornado, and whistled through the long vaulted galleries with a horrid hollow violence. One clap of thunder succeeded another before we had time to say God preserve us! and sounded, as it ran along the concave of heaven, as though all the artillery of the skies was opened to annihilate us; while from the celestial watering-pot the rain descended in overwhelming torrents, and quickly deluged every street and garden. The bells of all the churches in the city were set a-ringing, in order, as they said, to allay the sound of the thunder. God knows how far this had any effect; but the heavenly noises appeared to me completely to drown the terrestrial ones, and retain, as they ought, their pre-eminence. This scene, taken altogether, was quite *nouvelle* to me; but, notwithstanding its terrors, I could not for the soul of me repress a smile when I turned my eyes around and saw the fathers, some upon their knees, some upon their faces, and others throwing the holy water about with as much profusion as the ladies of New York do the whitewash; their hands trembling, their eyes staring, and their features distorted into as many grotesque forms as there were individuals. The fall of the Virgin was regarded as ominous; and in their terror they expressed their apprehensions that it forboded the downfal of their house. Possessed with this alarming idea, they supplicated every saint in the calender, except St. Dominic, to ward off the approaching evil: he, poor soul! was thought to have but little influence in heaven, or he would have taken care to prevent such a dreadful disaster and disgrace. I joined in their prayers as devoutly as my risible faculties would permit; for, maugre all my endeavours, the more I strove to conceal my merriment the more uncontrollable it appeared. I was therefore fain to hide my face on the ground, and let the effects of laughter pass for those of fear.

'Oh! thought I, as I lay in this manner, what would their reverences say if they knew that in me, instead of a pious Catholic, they had nursed an abominable heretic? The cause of the Virgin's downfal would be immediately accounted for, and I should be sent pell mell to perdition. However, luckily for me, all my actions were ascribed to devotion, and poor St. Dominic was anathematised in my stead. I could not help pitying the unfortunate block, which will, no doubt, undergo a severe castigation; for that, I understand, is frequently his portion, when he does not attend so complacently as he ought to his supplicant. But if their prayers are granted his venerable figure is ornamented with flowers and beads; nay sometimes, on extraordinary occasions, they oblige him with new clothes: but this accident under his very nose will, I fear, keep him in disgrace and dirty garments for a long time to come.'

In their progress from Buenos Ayres, Father Hernandez and his novice rowed forty leagues up the Plata; crossing from

island to island till they arrived at the Uraguay, which unites with the Plata, about two hundred leagues from the sea, and of which the navigation is hazardous on account of a multitude of rocks.

Hernandez was a man of an amiable and conciliating temper; and the secret object of his mission was to lull the discontents of the Indians, and of the officers and priests who ruled in the presidencies. His presence, however, was ineffectual to quell the disturbances which had already occurred at Rioja Minor, and he lived not to witness the massacre of the military and some other Spaniards:

'Our venerable friend and father sat for some moments in his chair, motionless and silent; and, as I gazed upon him, I doubted whether the unfeeling Policarpo had not put the final stroke to all his miseries: at length, the deep drawn sigh and tear of mental anguish announced him still a sufferer. I held him in my arms, and entreated him to take a cordial to raise his over-oppressed spirits. When his agitation had a little subsided, he complied with my request; but its effects were only momentary: he was obliged to be conveyed to bed, when a fever came rapidly on, and, the weather being excessively hot, before three the next morning he was delirious. I never left him for a moment: he remained for three days insensible, though perfectly passive; and I tried, with the assistance of one of the brothers who acted as town physician, every remedy that my imagination could suggest to alleviate his disorder, but in vain: the skill of mortals was of no avail, for the angel of death was waiting to conduct his spotless soul to regions of eternal happiness. About nine in the morning of the fourth day he dropped into a slumber, from which he awaked apparently relieved. He knew me, and extending his feeble hands to clasp mine, tried to articulate some sentences, but nature was too much exhausted. I knelt beside him, but could only distinguish the words—'Buenos Ayres—go—and the holy Virgin—' His voice failed him, and he made a sign to have the extreme unction administered. I gave him to understand that he had already received it; a faint smile beamed upon his countenance.—My friend, that smile was more than mortal; and never, never while I live, will it be forgot by me.—He then pressed my hand to his lips; and, with a feeble sigh, his righteous spirit took its flight for ever.

'To describe to you what I felt at that painful moment would be impossible: that God who knows the secret feelings of every human heart, can witness how unfeigned my sorrow was.

'The death of this excellent man was immediately notified to the commandant: the news, it seems, affected him; and, for once, I should hope his heart smote him for the unfeeling manner in which he had treated the aged and pious Hernandez.

'I followed the remains of my second father to the grave, to which it was consigned with all the respect his piety and virtues demanded. When the earth closed him from my sight for ever, I felt as though my heart was rent in twain, and thought the better half of me was buried: I wept like a child. And even now I at times start from my chair,

chair, and run to the apartment where I was used to sit and read to him; and there, in a kind of stupor, look around in hopes to see his placid smile, or hear the sound of his revered voice. Your feeling heart, my friend, can pardon mine this weakness.

'Adieu!'

Mr. Davie, as a foreigner, was saved by an Indian, and sent back to Buenos Ayres. From the advertisement prefixed to his letters, we learn that he went to Conception, in Chili, 'as he was last heard of from that place, in the year 1803: but whether he lost his life in any insurrection of the natives, or was imprisoned by the government in consequence of his correspondence being detected, is unknown.' His letters evidently bespeak a man of acuteness and reflection: but they contain few notices of any consequence which may not be found in the more ample narrative of Charlevoix. His style is sometimes incorrect, and frequently colloquial; and we had marked several passages which seemed to imply distrust in the righteous government of the Universe, till we stumbled on this pious ejaculation:

'Fashion, O thou almighty Ruler of the universe! my future fortunes as best shall please thy heavenly wisdom. Henceforth, my friend, I form no more vain wishes: experience has taught me resignation; and to the latest hour of my life, however long I labour through this world of disappointment and deception, still shall this conviction be my guide—*That what Omnipotence decrees, man must acknowledge right.*'

We know not whether the portion of Mr. Davie's correspondence now before us was originally destined for the press: but his adventurous spirit, and the uncertainty of his fate, may be allowed to blunt the shafts of criticism, and to excite regret for the loss of that information which has, perhaps, perished with him.

Muir —

ART. VI. *On Virgil's Two Seasons of Honey, and his Season of sowing Wheat.* With a new and compendious Method of investigating the Risings and Settings of the Fixed Stars. By Samuel Lord Bishop of St. Asaph, F.R. and A.S. 4to. 4s. 6d. Hatchard. 1805.

THE occasion of this critical essay arose out of the following passage in Virgil:

"*Täygete simul os terris ostendit honestum*
Pleias, et oceani spretos pede repulit amnes:
Aut eadem, sidus fugiens ubi Piscis aquosi,
Tristior hibernas cælo descendit in undas."

Georg. iv. 232.

These lines point out the astronomical characters of the two seasons of the year, at which it was usual to take the honey from the hives of the bees: one season, according to all commentators, being ascertained by the heliacal rising of the *Lucida Pleiadum*, in the middle of May; the other, by the cosmical setting of the same star, in the beginning of November.

'But (says the Bp. of St. Asaph) in this exposition a very great difficulty occurs. How is it, that Täygeta, setting cosmically, i. e. at sunrise, is considered as running away from Pisces? Pisces set in the morning before the Pleiads, lying to the west of them. When Täygeta is setting cosmically, Pisces is already set; and not a star of that constellation is visible above the horizon in any part of the sky. All have felt this difficulty. Petavius justly says it is insuperable: expositors of less science are content to say, that the circumstance of flying from Pisces is thrown in only for ornament, to enrich the description. But they have omitted to inform us, in what way nonsense can enrich or adorn; or to produce instances, as they ought to have done, of Virgil's propensity to this sort of ornament. The learned Heyne imagines, that this circumstance, though unintelligible with reference to any thing in the sky, may have allusion to some delineation of the heavens on a plane; in which the relative situation of the constellations was such, as to give an appearance of the Pleiad running away from the Fish. I wish this able critic had informed us, in what planisphere, ancient or modern, he had seen the relative position of the Pleiads and Pisces so represented; or according to what projection it could be so represented. The constellation of Pisces is always before the Pleiads, as has been observed, in the order of the diurnal revolution; and it is not usual in a flight, for the pursuer to keep a given distance *before* the fugitive.'

The difficulty is here precisely stated; and the solution of the R. R. critic consists in substituting the *acronychal* rising of the Pleiad for the *heliacal* rising, and the *Evening* setting of the Pleiads for the *cosmical* setting: the first phænomenon marks the middle of September, and the second, the 13th of April. In this Evening Setting, Täygeta, in poetical conception, may seem to fly from Pisces: for in the season at which the Pleiads are setting in the evening, the stars of Pisces are rising heliacally in the morning; and to the imagination of a poet, Täygeta plunges herself into the waters of the ocean, scared at the appearance of Pisces in the Eastern sky. It is properly urged by Bishop Horsley, that this circumstance of Täygeta flying from Pisces was intended as a circumstance of specification, in order to distinguish the evening setting from the *cosmical* setting, when no such appearance takes place:

'This exposition (says the author) is liable to two objections. The first is, that it may seem strange, that the setting of the star, so late in the spring, should be called a descending *hibernas in undas*. But the obvious answer is, that the epithet *hibernas* is not to be understood of

the season of the winter, but renders "stormy" at any season. The second objection is of more weight; namely, that the middle of April seems too early a season to find any honey in the hives at all; and this would be insuperable, if it were true, that the bees in Italy revived not from their torpid state before the heliacal rising of the Pleiads; which cannot be put earlier than the middle of May. And yet this is asserted by Pliny repeatedly, if his text be not corrupt, and remarkably in one place, in which he distinguishes between the climate of Italy and other warmer climates. For he says, that in warmer climates the bees awake so early as the acronychal rising of Arcturus; for which he assigns (with more accuracy than is usual with him, for he is right within a day) the 23d of February: but *in Italy*, he says, they remain in their torpid state till the heliacal rising of the Pleiads. Now this cannot possibly be true; at least it is utterly irreconcilable with what he says of the taking of the honey of the flowers; which, he says, was practised *every where:* therefore in Italy as well as elsewhere; therefore in Italy as well as in warmer climates. And yet the commencement of this *mellatio verna*, he says, was precisely on the thirtieth day after the swarming of the hive, and it was over before the end of May. His words are the most explicit that can be: Dies *status* inchoandi, ut quâdam lege naturæ—30^{s} ab educto examine; fereque Maio mense *includitur* hæc vindemia. Now if the bees revived not before the middle of May; it is impossible, that the hive should swarm before the middle of June, and the thirtieth day from the swarming would fall in the middle of July; and since the season lasted at least a fortnight, the end of it will fall beyond the commencement of the *mellatio æstiva*; and the bees would have no respite, to repair their loss after the first plunder of the hives. It is difficult to conceive, that all the passages in Pliny, in which the heliacal rising of the Pleiads is mentioned as the time of the reviviscence of the bees, are corrupt. But if this is not to be supposed, then we must suppose, either that Pliny was in an error; or, that when he speaks of the honey taken thrice every where, *in quocunque tractu*, he writes rather carelessly, using a large expression subject to many limitations, which he has not expressed, and that Italy is among the exceptions. I once thought, that this expression, *quocunque tractu*, might be understood of the particular regions which he had mentioned just before, Sicily, Crete, Cyprus, Africa. But this will not do; for Germany is among the countries mentioned. Upon the supposition, that Pliny ought to have made an exception of Italy with respect to the vernal honey, another supposition might be made; that Virgil, who certainly composed his Georgics not from any experience and observation of his own in all the various subjects of that work, but often copied earlier writers; might, in this business of the bees, follow some writer of a warmer climate, without attending to the difference between that other climate and his own. But the *trina mellis vindemia* is mentioned by Varro, as he is quoted by Heyne. Upon the whole, therefore, I cannot but conclude, that the three honey harvests actually obtained in Italy, and that the vernal was one; that it is not true, that the slumber of the bees continued in Italy to the heliacal rising of the Pleiads, although they might not wake so early as the acronychal rising of Arcturus, and

it is difficult to account for Pliny's mistake. However that may be, Täygeta's sinking herself in the sea, to hide herself from Pisces, is a just description of the evening setting of the star, and can be understood of nothing else: and this can describe no honey season but the first, when they took the honey of the flowers.'

Previously to the examination of this difficulty, the Bishop had turned his attention to another. Pliny mentions *three* seasons of taking honey: Virgil omits one, then, and the most important, viz. the summer season. To remove this objection, Dr. H. conjectures that Virgil, looking to the practice of the country people, who were not solicitous to separate the rich summer honey from the coarser autumnal deposit, substitutes one season, the middle of September, for the two which were used by the curious or opulent bee-men.

This criticism is succeeded by another; in which, again, Virgil's skill in Astronomy is vindicated from the comments of expositors 'half learned in Astronomy,' who have criticized these lines:

> "*Ante tibi Eoæ Atlantides abscondantur,*
> *Gnossiaque ardentis decedat stella coronæ,*
> *Debita quam sulcis committas semina—*"
>
> Georg. i. 221.

The precept is, do not commit the seed to the ground till the Pleiads disappear in the morning; and even wait until the *Lucida coronæ* shall have set. Now it has been objected that the setting of *Lucida coronæ* cannot possibly be connected with the cosmical setting of the Pleiads, because *Lucida coronæ* rose heliacally but a little time before.—Dr. Horsley shews that, in the latitude of Rome, the heliacal rising of stars, which have considerable Northern declination, is antecedent to the heliacal setting in the evening. The declination of *Lucida coronæ*, at the beginning of the vulgar æra of our Lord, was 35° 40′; and, by calculation, the heliacal setting of the star in Italy was about the 11th of December. Supposing, however, that the 11th of December was a proper season for committing the seed to the ground, why did Virgil mention the cosmical setting of the Pleiads, which happened in the beginning of November, and which was surely much too early? Let us hear how the Right Reverend author solves this difficulty:

'The answer to this will be, that it was the practice of some to anticipate the cosmical setting of the Pleiads. Virgil, condemning this practice, says, "Instead of beginning before the cosmical setting of the Pleiads, wait not only till that is over, but even beyond it to the setting of Lucida Coronæ." The propriety of this precept, and of this form of the precept (admitting the husbandry to be good), is set in the strongest light by a passage of Pliny, in which we are told,

told, that most people began their seed-time at the *heliacal rising* of Corona. Sementibus tempora plerique præsumunt, et ab undecimo die autumnalis æquinoctii fruges serunt a Coronæ exortu. Virgil says, "Instead of beginning with the heliacal rising of the Crown, or at all anticipating the cosmical setting of the Pleiads; wait, not only till the latter is over, but till the bright star in the Crown is setting." Virgil's advice, however, was not followed; for although Pliny condemns the sowing so early as the heliacal rising of the Crown; he says the true principle was not to sow before the beginning of the fall of the leaf; which was supposed to take place on the very day of the cosmical setting of the Pleiads.'

The latter pages of this small tract are occupied with a description of the method employed by the learned author in the investigation of the risings and settings of the fixed stars. Every astronomical treatise does not contain methods for computing the heliacal and cosmical risings of heavenly bodies. The direct and obvious method is to deduce from the latitude of the place, and from the right ascension and declination of the star, the angle made by the ecliptic with the horizon, and the longitude of the point of the ecliptic on the horizon. Instead, however, of this and of other methods, Dr. Horsley maps the figure of the heavens at the stated period by means of the stereographic projection; and his plane of projection is the plane of the horizon: his reasons for adopting which plane are these:

'Instead of projecting the sphere upon the plane of the meridian, I project it, for high latitudes, upon the plane of the horizon; for low latitudes, upon the plane of the prime vertical. It is of great importance in stereographical projections of the sphere, to choose a circle for your primitive, with which the other great circles you may have occasion to introduce, may make small, or at least no very large angles: for the greater the angle is, which any oblique circle makes with the primitive, the longer will the radius be of the projected circle; and the principal difficulty in the execution of the stereographic projection, arises from the immoderate length, to which the radii of some of the oblique circles may run, if you have not chosen your primitive well. In the matter in question, it is a very great disadvantage of the projection on the plane of the meridian, that the ecliptic, a principal and necessary circle, will swell in projection to an enormous size; for in all latitudes, the angle which the ecliptic makes with the meridian is often very large, and it is never small: the *minimum* of that angle being the complement of the obliquity of the ecliptic; and it may be of any size between that and a right angle. But the ecliptic often makes a very small angle, and never makes an angle immoderately large, with the plane of the horizon in high latitudes; and, in low latitudes, with the plane of the prime vertical: so that on the one or the other of these two planes we shall always have a tractable ecliptic.—Which of these two planes is to be preferred, in any particular case, any one, experienced in this kind of work, will

easily foresee. It might be a good general rule, to make the projection upon the plane of the horizon for any latitude above 45°; and upon the plane of the prime vertical for any lower; were it not, that we have to do with a certain small circle (as will appear in the sequel), which is always more manageable on the plane of the horizon, than on the other plane: and this, in many cases, induces me to make the horizon my primitive circle, although the latitude should be as low as 40°.

'It is a great advantage of making the projection on one or other of these two planes, that all the risings and settings of any particular star may be brought under the eye in a single figure: whereas if the meridian be made the primitive circle, two separate projections will be requisite; one for the risings, another for the settings; which, with increased labour, is a loss of perspicuity and evidence in the representation of the whole.'

Bishop Horsley then immediately proceeds to his construction; and, in order to understand it, the reader must be acquainted with the principles and processes of the stereographic projection. If he be uninformed in this respect, we know not any English treatise more proper for his consultation than the Practical Mathematics of the Right Rev. author, published at the Clarendon Press in 1801: in which volume, together with other projections of the sphere, the stereographic is discussed. Among the Foreign Transactions, however, we recollect a memoir of M. Delambre on the Stereographic projection, which pleases us much more than the labours of the learned Bishop; and by its clue we have followed the constructions of the present treatise. The projections satisfactorily exhibit to the eye, in one compact simple diagram, all the circumstances attending the risings and settings of the stars; and this is certainly no inconsiderable advantage in Dr. Horsley's method, if we may call it by distinction *his* method: though the claim to originality, advanced indeed with modest doubt, ought not to pass unnoticed. Delambre, treating of the projection, says, "*Enfin on trace les mappemondes sur l'horizon d'un lieu particulier*, &c. and he exemplifies his method, and employs his formulas in constructing a projection on the plane of the equator. On this question, however, we might perhaps wander in a wrong road of criticism; since, in fact, we do not clearly perceive in what the peculiarity of the Bishop's method consists, nor perfectly understand whether the claim to originality be for the whole or for a part only of that method.

We have been much gratified by this little tract; and we cannot forbear to admire the various talents and diversified pursuits of its learned and acute author.

R.W.

ART.

ART. VII. *Chirurgical Institutes, drawn from Practice, on the Knowledge and Treatment of Gun-Shot Wounds*; illustrated with some singular Cases, and Cures of *gallant* Warriors. By H. St. John Neale, Esq., Surgeon, formerly of His Majesty's 5th Regiment of Infantry, and 16th Regiment Light Dragoons, during the late War in North America. 8vo. 6s. Boards. Egerton, &c.

GUNSHOT wounds possess a character in several respects peculiar to themselves, and consequently require a method of cure different from that of injuries inflicted by other means. It falls to the lot only of a certain description of the profession to practise in this particular department; and from various causes, sufficiently obvious, it generally happens that those persons, who have enjoyed such opportunities, are neither the best qualified nor the most inclined to communicate to the public the result of their experience. A work, therefore, written by a gentleman who has gained his knowlege in actual service, and by whom the opportunities of making observations appear not to have been disregarded, must be considered as a valuable acquisition to the art of surgery; and viewing the performance in this light, we cannot but lament that the other qualifications of Mr. Neale do not enable him to present to us his opinions and facts in a way more likely to ensure to them a due share of respect and attention. Fine writing we do not expect on such subjects, and we would almost say that we do not wish for it: but that an author should express his ideas with clearness, that he should avoid ambiguity, and that he should not perplex us with a multiplicity of useless words and phrases, are essentially requisite both to gain readers, and to enable them to derive any advantage from the book which they read.* It is not merely the style of Mr. Neale that we have to criticize; although professedly stating facts and disclaiming theory, he abounds with hypotheses and speculations; and, which is still worse, they are hypotheses which have neither ingenuity nor novelty to recommend them. He adopts, at least by implication, the doctrines of the humoral pathology; and, when discussing the action of remedies, he introduces a nomenclature which might have been intelligible a century ago, but which will certainly not be very perspicuous to most medical men of the present day.

Mr. Neale's plan is first to treat of the nature of gun-shot wounds in general, and secondly of wounds of this description

* Mr. Neale is also very profuse of epithets. His dedication to the Duke of York is extremely complimentary; and every person whose case he particularizes, whether officer or private, is complimented with the title of *gallant*, *brave*, &c. The title page even affords an instance of this parade.

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in particular parts. He commences as follows; 'Before I enter upon the general treatise of gun-shot wounds, let us take a small view, and see, what gun-powder and shot are made of.' Beginning in this manner from the origin of things, we are informed when and by whom gun-powder was invented, and that it consists of 'three simples, viz, saltpetre, sulphur, and the sallow or willow coal.' These three substances have nothing in them injurious to the human frame; nor, as he farther remarks, has lead, of which shot and bullets are composed, any poisonous effect while in the metallic state; so that it is not from their contact with the parts of the body that they produce such bad consequences as are usually derived from their entrance into it.—Mr. N. deems it particularly necessary to make these remarks, on account of the erroneous proceedings of the older surgeons respecting the extraction of the ball, 'It seems (he says) to have been considered by them as the greatest object to get out the ball, when in fact it is no object at all, when lodged in fleshy parts, unless it can be done with ease and safety.' The older practitioners might have been too anxious on this subject, but our readers will probably suspect that Mr. Neale is in danger of falling into the opposite extreme. It appears, however, in a subsequent part of the work, that he is not so indifferent about the extraction of the ball as might be concluded from the above quotation; since he gives a number of directions for its accomplishment, and evidently regards it as a matter of the first importance.

The circumstance, in which this author seems to differ most remarkably from the generality of modern practitioners, is in the extent to which he recommends almost all gun-shots wounds to be dilated. This he does not only for the purpose of extracting extraneous substances, but also in consequence of his ideas respecting the form of a gun-shot wound, which often consists of an orifice smaller than the internal injury. His remarks appear judicious: but perhaps more depends on the judgment of the surgeon in each individual case, than on any general principles that can be laid down. The author is very severe on Mr. Hunter's opinion respecting this point: observing, 'The late Mr. John Hunter, for whose memory I have the highest respect, it is well known, condemned the practice of dilating gun-shot wounds, which opinion, every Gentleman of the profession, who has seen active service, I am well assured, must consider as one of the most absurd ideas ever sent forth to the world, and from one of so much celebrity, it must have proved of the most dangerous tendency.'

Another peculiarity which we may notice in Mr. Neale's practice is his very frequent, we may almost say indiscriminate

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use of bark. If we may judge from some expressions, and from the detail of some cases, he not only gives it in particular stages, and on the occurrence of particular symptoms, but, wherever any extensive injury had been received, he employs it from the commencement of the case. His commendations of this remedy are indeed expressed in language that is almost ludicrous.—He is likewise very lavish in his encomiums on opium, '*that divine remedy*;' yet we think that his directions for its use are more appropriate.—In treating on the cure of gun-shot wounds in general, he prescribes the following indications of cure; 'to change the figure, and as much as possible, the nature of the wound, by proper dilatation, making sometimes a bleeding wound of that which was a contused one. The second, is to remove, if possible, all extraneous bodies.* The third, is to stop the hæmorrhage. The fourth, is to prevent the accidents which may arise, and to remedy those which already appear.'

A practice, which is very frequently and urgently recommended, is to divide any membranes, such as the sheaths of muscles, aponeurotic expansions, periostea, &c. if there be reason to suspect that the subjacent parts will become swelled, or that matter will be formed behind them. This operation Mr. N. quaintly calls unbridling them, and he quotes many instances of the success attending it.—In speaking of topical applications, he in general recommends those of the mildest kind; when, however, unkindly suppuration has taken place, or is even threatened, he advises the use of what he calls 'Animated Digestives; which have a power of correcting the juices, and defending the sides of the wound, against the corruption which might otherwise prevail.' He declines to enter into any specification of them, because they are so well known: but we must regret the omission, since we are not certain to what remedies he would apply the term; and if, as we suppose, he intends to designate by them stimulating substances, we should have been glad to have heard which of them he found the most useful.

After having given directions for the management of the wound, he remarks that the general state of the constitution is not to be disregarded. The surgeon 'must hasten and labour

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'* If the ball is lodged so deep, that it cannot easily be laid hold of, before or after the dilatation, no violent efforts should be used, with a view to extract it. If it is in a fleshy part it will do no injury, but work itself towards the surface in time, perhaps long after the wound has cicatrized, and sometimes at a great distance from where it entered. I have cut balls out at the ham, which entered the buttocks, and the upper part of the thighs, two, and some balls three years after the wound was healed.'

hard

hard to still the tonic convulsions of the nervous system, to correct the antecedent cause, to restore the secretions and evacuations which have been interrupted; indeed, to set nature to rights again, without which, the wound will grow malignant, and the patient may lose his life by, perhaps, a seemingly slight indisposition.'

We mentioned, in the beginning of this article, the adherence of Mr. Neale to antiquated theory; and in confirmation of our assertion, we shall extract his account of the fermentation of the blood, and the method of allaying it:

'As the fermentation of the blood, is only maintained by the equal proportion both of the quantity and size of heterogeneous, and especially of the acid, volatile, and acrid parts which encounter with each other in it, it is sufficiently clear, that this fermentation will be the more violent, the more the saline parts are numerous, large, and of such a nature as briskly to encounter each other. Therefore in order to check this violent motion, whether in wounded or other patients, we must either diminish the superfluous fermentative parts of the blood; or take care that only such of them as ought to move be put in motion; or attenuate and divide them, if they are too large and bulky; or lastly, obtund and sheath them up, in such a manner, as that they cannot act upon each other.'

Methods are pointed out for answering these four intentions, and thus preventing the mischief caused by the motion of the acrid particles: but these we shall not lay before our readers, since we apprehend that very few of them believe in the doctrine. Fortunately for mankind, it appears that Bark possesses the rare quality of fulfilling in some degree all these indications; for we are informed that it 'will appease the fever, dissipate the serum, which abounds in the mass of blood, correct the acrimony of salts disengaged during the treatment of the wound, favour the generation of new flesh, and the formation of a laudable cicatrix.'

Subsequently to these remarks on the cure of gun-shot wounds in general, we arrive at the treatment of wounds in the different parts of the body; which are considered in succession, beginning with the head, and proceeding to the neck, clavicle, thorax, &c. to the extremities. This may be regarded as the most valuable part of the work; since it affords the author more scope for detailing his practical information, and he occasionally illustrates his doctrines by the introduction of cases which fell under his own inspection. For these, however, we must refer to the volume; which, notwithstanding objections to particular parts, may be recommended to the serious perusal of those who are engaged in the military department of medicine.

Bos.

Art.

ART. VIII. *Critical Reflections on several important practical Points relative to the Cataract:* comprehending an Account of a new and successful Method of couching particular Species of that Disease. By Samuel Cooper, Member of the Royal College of Surgeons in London. Crown 8vo. 4s. 6d. Boards. Longman and Co.

A REMARKABLE diversity of opinion, prevailing with respect to the best method of relieving the blindness produced by an opacity of the crystalline lens, must be well known to all our professional readers. It might naturally be expected that some cases would occur which would be more particularly adapted for the operation of extraction, and others for that of depression: but, when we observe some of the most eminent practitioners uniformly recommending extraction, and others as strenuously in all cases advising depression, we are unavoidably led to suspect that each party is biassed by an undue attachment to a favourite speculation. The writings of Mr. Ware, and still more his great dexterity in operating, have produced in the public mind a strong tendency to favour the plan of extraction; while the judicious observations and extensive experience of Mr. Hey must have materially contributed to turn the current of opinion towards depression. Mr. Cooper's object, in the treatise before us, is to examine the most important points of this disputed question, and to introduce to the notice of English readers the sentiments of some foreign writers, who have paid attention to this subject, and whose works are at present not much known in this country; particularly those of Richter and Scarpa.

Couching, or depressing the cataract, having been an operation performed by the antients, while extraction is comparatively a modern invention, the author properly begins by inquiring into the causes which brought the former operation into disrepute, and induced surgeons to substitute a new one in its place. For this innovation he satisfactorily accounts, by shewing that the erroneous ideas formerly entertained respecting the structure of the eye, and the nature of the cataract, would render it more wonderful that the attempts to depress the lens should ever have succeeded, than that they should very frequently have failed. The coarseness of the instruments employed, and the rudeness of the style of operating, were perhaps the cause of less injury to the eye, than the mistakes into which anatomists fell concerning its formation. Without entering into a complete history of all these erroneous opinions, one of them is pointed out as in itself sufficient to produce the most mischievous effects, viz. the notion which obtained respecting the posterior chamber

chamber of the aqueous humor, which was supposed to be a space of considerable dimensions, capable of affording a lodgment for the crystalline; and, accordingly, one of the objects attempted was to depress the lens into this supposed cavity. The consequence of this state of affairs was that, even so late as the period at which Mr. Sharp published his observations, couching seldom proved successful, few patients recovered their sight after this operation, and most surgeons were deterred from undertaking it:

'Things were in this faultering state, when the rival plan of extracting the opaque body through an incision in the cornea, attracted attention; at a crisis the most propitious to its first establishment; at a moment when extreme exigency urged, either that alterations should be effected in the manner of accomplishing the old operation, or that an entirely new one should be put to the test of experiment: the almost universal disgust, which the inefficacy of Couching had diffused, greatly facilitated the introduction of Extraction, and might even have extinguished, for a while, any emulative spirit to improve a method, that had been so long ineffectual; the difficulties of Extraction were, also, partly surmounted by the skill of its first promoters, the most expert surgeons of the age; and such great examples, added to the plausibility, and seemingly eradicative nature of the proposal, could not fail to bias the profession at large in its favour.'

It is not surprizing that, under such circumstances, extraction should gain many advocates: but the more accurate knowlege which we now possess concerning the eye, and the improved state of our instruments, have removed most of the objections that formerly attached to the operation of depression, and have again fixed the attention of the public on this mode of removing the cataract.

Wenzel's treatise being the work in which extraction is defended with the most ability, Mr. Cooper examines at some length the arguments which the Baron employs in its favour; particularly dwelling on those points in which the effects of this operation are contrasted with those of couching. We consider it as clearly proved that Wenzel has unwarrantably magnified the danger and difficulties of the latter; and many of his observations are directly contrary to those of Hey and Scarpa, whose ample experience appears to have peculiarly qualified them for judging of its effects.—Mr. Cooper, who is a strenuous advocate for depression, next enlarges on the difficulties which attend the operation of extraction, and strongly contrasts them with the easy and simple means by which the lens is depressed. Were the ultimate effects of the two operations similar, and were they both productive of an equal degree of pain to the patient, the extreme delicacy of the former

is certainly a powerful argument against it; and it is not less objectionable because the superior skill of an individual may occasionally surmount many of the difficulties which attend it.

A very important point to be ascertained in this complaint, and one which affords the most ample scope for exercising the judgment of the practitioner, is whether the case is likely to be benefited by removing the lens. Mr. Cooper states the following circumstances, as the best adapted for guiding the surgeon in this determination:

'When, in the incipient state of the disease, the patient discerned objects, as it were, through a mist, which increasing in density, at length became a complete impediment to vision; when the opacity of the crystalline lens has supervened gradually, and has not been preceded, and is not accompanied by a chronic ophthalmy peculiarly affecting the interior of the eye; when no particular head-ach, nor pains in the eye and eyebrow have been experienced; when the pupil, notwithstanding the Cataract, preserves its circular figure, and the faculty of varying its dimensions in the different degrees of light; when the patient can distinguish a brilliant light from total darkness; and, especially, if in a moderate light, where, usually, the pupil is not too much contracted, he should be able to distinguish bright colours, and the shadows of objects before him; there is every reason for performing, and expecting success from, an operation.'

We have afterward a number of interesting and useful remarks, taken from Richter, on the means of distinguishing between the different states of cataract, whether hard, fluid, or of that kind which has been called *cheesy*. Operators have often been disappointed in their projects of success, after both extraction and depression, in consequence of the formation of what has been denominated membranous cataract. For some time, the nature of this complaint was not completely understood: but now we are well assured that it depends on the anterior portion of the lens, which, when left entire in its natural situation, is liable to become opake. In the extraction of the lens, this membrane is frequently left behind: but whether this be the case in *couching* is a point on which different opinions have been formed; Scarpa thinks that it is impossible to depress it, while Richter supposes that it generally is depressed together with the lens. The controversy does not appear very important; because, where couching is practised, the operator always has it in his power to lacerate and destroy the membrane with his needle, so as effectually to prevent the secondary cataract from being formed.—An important circumstance in depressing the crystalline is to rupture its capsule at the same time when it is removed from its natural situation; the consequence of this is that, after some time, it becomes entirely absorbed, an effect which it seems is not produced when it is

buried entire in the vitreous humor.—Mr. Cooper next enters into the consideration of the best form for the needle; and he prefers the curved instrument employed by Scarpa.

This treatise contains a considerable portion of interesting matter, and is written in a simple and perspicuous style. The facts and arguments brought forwards in favour of depression, which are in a great measure professedly taken from the writings of Scarpa and Hey, are calculated to weigh very powerfully with every unprejudiced mind. They clearly point out the causes which formerly impeded the success of this operation, and they also demonstrate that these impediments no longer exist.

Bos.

Art. IX. *Travels through Italy*, in the Years 1804 and 1805. By Augustus Von Kotzebue, Author of Travels in Siberia and in France, &c. &c. 4 Vols. 12mo. 1l. Boards. R. Phillips. 1806.

M. Von Kotzebue is a very fertile, a very singular, and sometimes a very interesting writer: but, not unfrequently, he is flimsy, self-sufficient, and even tedious. Several of the prominent passages in these volumes manifest such quickness and justness of observation, and such felicity in communicating first impressions, that, with a little more pains, and much more good sense, their author might rank at the head of our continental tourists. Unfortunately, however, for himself and his readers, he allows his pen to move with the rapidity of his vehicle; and no sooner does he return to Berlin than he imparts his acquired velocity to the press. This precipitation is partly the result of determined purpose; since, for a long time before he saw Italy, he had perused no accounts of that country, and, after he had seen it, he still wished to read nothing concerning it, in order that his judgment might remain unbiassed: but this is a reduction of labour which is more to be commended for its novelty than for its justice or its wisdom. The analysis of a country involves so multifarious a complication of facts and appearances, that many of them must wholly escape and others impose on the eye of the passing observer. Should the latter, therefore, undertake to lay his descriptions and remarks before the public, considerations of ordinary prudence, and regard both to his own reputation and the instruction and gratification of his readers, will naturally suggest a previous acquaintance with the writings of his most distinguished predecessors. When their information is correct and satisfactory, a simple reference will spare repetition; while the

the new traveller may supply their omissions and point out what is false or distorted, till, by a series of publications conducted on this plan of checks and improvements, accurate delineations may be at length obtained. The person who should attempt to illustrate any department of science, without informing himself of the existing state of the subject, would be justly chargeable with temerity and presumption; and we cannot perceive that the traveller should be held less reprehensible, who wilfully rejects all knowlege of the statements and opinions of those who have gone before him. Before he commences his intended route, he should select from prior recitals the principal topics of speculation and curiosity, that he may omit nothing from ignorance of its existence; and, after he has completed his peregrination, he might derive much benefit from a more deliberate perusal of the best authorities, since thus he might confront his own remarks with those of others, and retrench or enlarge, correct or elucidate, as circumstances might require. All this, we apprehend, might be effected, without subjecting the understanding or the feelings to any undue controul: because the legitimate end of comparison is not to warp the judgment, but to amend error and ascertain truth.

The present tourist, however, sickens at every thing which savours of study and reflection, and hesitates not to assert that the talent of observation is not to be acquired, but that most things are viewed justly the first time, or never. His book, he admits, may be only a collection of cursory remarks, but he contends that cursory remarks are not the worst. Perhaps they are not: but they are unimportant in proportion as they are cursory, and mature observations are surely much better. Indeed, when we consider that a comparative examination of the author's manuscript and the most respectable printed accounts of Italy might have spared the redundancy of some notices, the scantiness of others, a dreary enumeration of the productions of art, and many dull crudities on their merits, we cannot very patiently brook the unblushing avowal of hurried publication.

• With our excentric rambler, we disapprove the affectation of formality: but there is an affectation of singularity, and there is a flippancy of manner, which are scarcely less childish and disgusting. We need not go far in quest of an example. Immediately subjoined to the title, are these words:

'To serve as a Preface.

'A list of those who are *not* to read this work,' &c.

Disdaining the tame and vulgar practice of noting days and the names of places, the author sallies forth with a few philo-

sophical remarks on the 'Travelling Propensity;' and he commences his journal by informing us that the Emperor Alexander of Russia also travelled, and that he is deservedly adored by his subjects in Esthonia and Livonia. The reader then finds himself set down on the banks of the *Veipers* lake, in the midst of a rude commotion of the elements; and he has scarcely time to breathe and recover his senses at Dorpat and Riga, when the running title of 'Air Balloons' again hurries him off, and induces vertigo. Yet we would rather take our passage from St. Petersburgh to Naples in one of these aerial vehicles, than endure the hardships and vexations of posting, as they are here set forth in twenty querulous pages. A gallows in the neighbourhood of Graudentz, however, restores the philosopher to good humour and sentimental merriment: 'the thing, indeed, (he says) is not distinguished from its wooden brethren elsewhere, but the hill on which it is situated is so finely planted with noble oaks, that it seems to invite the poor sinners to have themselves hanged up with pleasure. I am not in jest.' Nor are we, when we hang up to reprehension such indecent puerilities in the pages of a pretty shewy-looking book, so finely adorned with learned names and beautiful extracts, that it seems to invite the poor authors to have themselves exposed with great complacency.

The dungeons of Nuremberg and Augsburg excite more dignified emotions, expressed somewhat in the manner of Sterne:

"Good heavens!" cried I, "whence comes this stench?" I was answered, "Under us are the prisons, which extend as far as the Sebaldus church." "Sacred Howard!" I exclaimed, "what a shuddering would have seized thee here!" "Oh!" said my guide, "the prisoners are in no bad condition; they have good eating and drinking."—"But no air!"—"That they are accustomed to."—"Then I wish the whole Nuremberg Senate were confined here; and had their delicate partridges, and truffles boiled in champaign, every day given them through an opening to be instantly closed again."

Again; the Senate house of Augsburg is described as spacious, but more gaudy than elegant:

'If we look out at the window into the court below, we shrink with horror from the spectacle; for here we perceive dungeons under ground, covered with lead, intended not merely as the temporary receptacles, but as the permanent habitations, for prisoners. Good God! have then the Hans Towns alone the right, in an age in which Howard has lived, not to punish crimes, but to torture men? I wish all the springs about Augsburg were suddenly stopped up, and not a drop of water could be conveyed into the town, that the Senators might suffer the most parching thirst till they should order these leaden roofs, which put us in mind of the Venetian inquisition, to be removed,

moved, and the prisoners brought into the open day, as criminals who may have deserved death, but not such torments.'

Mr. Kotzebue is a warm admirer of the Tyrol and its inhabitants. The latter, it should seem, have, on several trying occasions, experienced very ungenerous treatment from the government to which they were attached, and in the defence of which they were prodigal of their services and their blood. They are fond of the chace, and of the memorials of perilous exploits. The celebrated dexterity of their sharp-shooters, we are assured, is not exaggerated; for the author had an opportunity of observing that, of ten or twelve shots, eight at least entered the bull's eye, and not one missed the target. 'The man, whose business was, after every shot, to mark the place where the ball had struck, was also so certain of no one's shooting wide of the mark, that he often continued standing near it during the firings. He must indeed have been as well satisfied of the sobriety as of the dexterity of his countrymen.'

The details respecting Zambeccari and his aerial excursions are *highly* interesting: but they derive their attractions from the circumstantiality with which they are related, and they are too extensive for insertion in this place.

Much of this motley production is devoted to the views and ruins, the public buildings, the paintings, and the statues of Rome: but, with all the author's affected contempt of professed artists, he must permit us to say that we are tasteless enough to prefer their reports to his hasty or paradoxical criticisms. As he can discern no beauty in the Tuscan vase, so he finds nothing remarkable in the Moses of Michael Angelo but its size, nor any thing striking in Raphael's Deposition in the Borghese Palace. He gives what he calls his *own view* of the numerous holes in the walls of the Coliseum, and then admits that the height of some of these holes at once destroys his hypothesis. 'Yet why,' adds he, 'should I trouble myself with devising reasons for an inexplicable matter? Let every one think as he pleases.' And why, we may ask, should he waste paper and print in idly sporting with his reader?

The author's account of Naples and its environs, on the contrary, contains much curious and important information, and much graphic exhibition of scenery and manners. His picture of the ignorance, superstition, cruelty, and debauchery of the inhabitants, though truly deplorable, is not overcharged.—The few extracts for which we can make room will sufficiently speak for themselves.

'As we go from the place Largo del Castello to the Mole, we must pass a corner where the lists of the letters arrived are hung out. As the throng of people is there at all times very considerable, it

gives rise to some singularities which in my opinion are confined to Naples. The letters are numbered, and the names of those to whom they are addressed are marked alphabetically, but these are the christian and not the surnames. This does not, however, apply to all without exception; for whoever has the good fortune to be a prince will have a place apart, marked by the letter P.

'Many who cannot read come also to inquire if there are letters addressed to them. A shrewd fellow has converted the ignorance of these into a source of emolument. He stands there with a packet of blank papers in his hand: the person who wants his assistance approaches him, and giving him a farthing or two, mentions his own name. The other casts a glance immediately over the list, and when he finds the name there, he does no more than write on a piece of paper the number under which it stands: this he gives to the inquirer; who hastens with it to the post-office, and receives his letter without ceremony: whether the receiver be right or not, is no matter of concern, if he will but pay the postage.

'The letters of foreigners are not put on the list, but are thrown in a heap in the post-office. When a person of that description inquires for a letter, they direct him to the heap; which he turns over till he finds it, or is satisfied there is none for him. But if he chooses, he may take one not addressed to him, provided he pays the postage, which is the only evidence required of its being his property. It may easily be imagined that disorders must necessarily arise from such a want of all arrangement. Every foreigner will do well to have his letters addressed to a banker.

'But to return to the corner I before mentioned. The man who marks down the numbers is not the only one who has found a source of profit there, though indeed he collects his receipts with the most ease and convenience. There are half-a dozen small tables in the street; and as many men sitting before them, with physiognomies as worn out as their coats. They hold pens in their hands, and a folded letter case lies before them. They need only dip their pens in the ink-stands near them, and they are ready to write letters of any conceivable purport to every quarter of the habitable globe. A second chair opposite to theirs, invites the needy letter-sender to sit down, and communicate his thoughts to one who will give them the polish of good diction. Here we see an old woman; there an honest sailor; in a third place a warlike hero; and in the fourth a brisk lass: they have sons and mothers, and all sorts of concerns of the heart, far and near, in the Old and the New world.—The old mother, for example, takes a seat (a scene that I have myself witnessed) opposite to the first writer, who had lost his nose (which is no uncommon thing here). He immediately puts his pen to paper: the date he had already written beforehand on the edge of the sheet, in order now to lose no time. He was right, for the good old dame is a little prolix. Her only son was roving about the world; and she wished him much to return, for she felt her latter end approaching. She affords proofs of her sickly condition by frequent coughing, which interrupts the torrent of words; and the shower of tears that frequently gushes down betrays the emotions of her mind. What I have comprehended in a short

short space, costs the poor old woman a multitude of words; which all imply the same thing, for she was in want of nothing less than expressions, her tongue appearing to be the healthiest part about her. The man listened patiently to her, digested her copious flow of thoughts with the greatest rapidity, and committed them with no less expedition to paper. The old woman put on a pair of spectacles, and followed every stroke of the writer's pen with strict attention. She often spoke in the mean time; recalling what she had forgotten, and making such amplifications as she found requisite. The gentleman of the quill paid no regard to her; but having fathomed the spirit of the intended letter, wound it up with expedition, not letting his pen drop till he had brought himself through the labyrinth of conceptions to the close of the epistle. He then read it over to the old woman; who nodded approbation, and let a smile steal through her wrinkles. The dextrous penman presented her with the instrument for subscription; which, however, she declined at this time *for various reasons.* He then desired her to spell her name, which he wrote; and closing the letter with a wafer, put upon it the name and address of her son, and delivered it to the tottering old dame. She laid hold of the paper that expressed her wishes but not her ardour, with her left hand, and directed her right to her pocket; which, after much apparent trouble, at length reluctantly opened, and afforded a copper coin, which she gave to the writer, who had long stretched out his hand to receive it. She then hobbled with the letter to the post-office; and he quickly folded another sheet, unknowing and unconcerned whether he next should have to express the overflowings of a joyful or an afflicted heart.

'All this correspondence is commonly conducted in such a loud and public manner, that the post-office has no occasion to break open the letters: it need only dispatch a few idle persons with good ears among the populace. Soldiers and sailors proclaim their affairs to the world without hesitation: their gesticulations while dictating are none of the gentlest, and they often beat with vehemence on the table of the writer.—It might, indeed, be more difficult for a listener to catch the sensations of a bashful maid. I have seen some of this description also sitting and dictating, and I will venture to affirm that the letters were to the constant or inconstant ones who had stolen their hearts: but I have no other proof of this than the unintelligible whispering, the down-cast looks, the varied colour of the cheeks, on her side; and the friendly glances of the secretary.

'These men of genius have, however, not erected their pulpits in the street for only the dispatch of letters, but also to decypher such as arrive for those who cannot read. On the day when the post comes in, a different scene is exhibited from that which we have just enjoyed. All pens are at rest: the lips only are in motion; and, as may be easily conceived, there is another interesting supply for the curious observer. The fixed attention with which the hearer hangs on the lips of the reader, the varying passions, the accomplished or defeated hopes, of the former; are well contrasted with the perfect indifference of the latter, and the unchanged voice with which he proclaims both joyful and melancholy news. Such various scenes are to be witnessed

no where but in the open street.—A friend of mine was once present upon a droll occasion of this kind. A sailor received a letter which he appeared to have waited for with the greatest impatience, and carried eagerly to the reader. The latter unfolded the paper, and commenced with the greatest unconcern the following billet, while the rejoiced sailor appeared ready to seize the words out of his mouth; "A greater rascal than you I never saw." It may be easily imagined how the looks of the gaping sailor were in an instant changed. He had no inclination to hear a continuance of the letter in the presence of a laughing crowd; but snatched it out of the hand of the reader, and crept away uttering imprecations.

'We daily meet with these street-pulpits, surrounded with more or less bustle; and it is a characteristic of the Italians in which they distinguish themselves from the French, that they display their ignorance without hesitation. The common French are just as little able to read as the Italians, but they never can be brought to acknowledge this to others. The Frenchman is vain and ignorant; the Italian ignorant only.'—

'As I was one morning passing through a populous street, I perceived a crowd of people assembled before the stall of a shoemaker, round a woman lying on the ground. It being a custom with me to neglect no opportunity of watching the people, I pushed through towards the place; where lay *a woman dying*. At the same time I heard from the lips of many by-standers the words (which chilled my blood), "*She is dying of hunger.*" The sight of the suffering creature confirmed this but too powerfully. She was scarcely covered with rags, and appeared a miserable skeleton of about thirty or forty. She lay on the pavement close by the shoemaker's stall; and by her side stood a broken straw bottomed chair which had been pushed towards her. That she was in the agonies of death, was evident. No one passed without standing a moment to survey the hideous spectacle; but all went on again as soon as they had satisfied their curiosity, without attempting to assist her. I had pushed through the crowd, till I was the nearest to her. With my purse in my hand, I prayed for God's sake, I called on the holy Virgin, that some one would have mercy on her; but in vain! In the open stall were a master and two journeymen: I offered them all I had by me if they would take the woman in, and lay her on a bed; but to no purpose. One of the men actually laughed; probably at my bad Italian. It is some consolation to me to think that the dying person understood my motions, if not my words; for her look rested on me, and I was the last object on which her closing eye was fixed. Upon that, she immediately died!

'I was still not disposed to believe it; I retained the hope of being able to save her, and therefore continued to keep my post near her: but a person, probably a physician, passing by, took hold of her hand, and feeling her pulse, pronounced with great composure, "*She is dead,*" and went on. I also now stepped back to a little distance, but did not leave the street, that I might witness the end of this scene. The corpse lay a quarter of an hour in the street, stared at by thousands; till at length some sbirri came, and dragged it away.

Yes;

Yes: I now deprecate this horrid incident before all Europe. I say aloud, *On the fourth of December* 1804, *at ten in the morning, a human being perished with hunger in the street Giacomo, one of the most populous streets in the city of Naples.*—N.B. The king went to the chase to-day; when I saw twenty or thirty dogs passing, and all in excellent condition.'

With respect to the late political contentions at Naples, we are told that

'Among the atrocities of the revolution, every one still relates with horror that the Lazzaroni roasted men in the streets, and begged money of the passengers to purchase bread to their roast meat. Many of them carried in their pockets fingers, ears, &c. which they had cut off; and when they met a person whom they looked upon as a patriot, they triumphantly exhibited their bloody spoils. One of these murderers shewed with exultation a reeking dagger to one of my acquaintance, boasting that he had plunged it into the bosom of a jacobin. The person to whom he was speaking was obliged to feign excessive joy at the account: he inquired who the jacobin was, and heard the name of one of his most intimate friends. On this occasion the women were the most outrageous; it was sufficient to be pointed out by one of these furies as a jacobin, to be instantly sacrificed. All who wore cropped hair were devoted victims. False tails were procured; but the deception being perceived, the people ran behind every one that passed, pulled him by the tail, and if it came off, it was all over with the wearer. Upwards of two thousand houses were completely plundered. The Danish consul was often in danger, because his uniform was mistaken for French. Every thing was done *per la santa fede*, so that *santa fede* is now become an opprobrious term. For three months Ruffo and his Calabrians indulged in these excesses. The French at length came, and in twenty-four hours tranquillity was restored. Their number did not exceed four thousand, but that was sufficient for such a pusillanimous enemy. The measures they adopted were indeed severe: when, for example, they met a suspected person, all they did was to smell at his hands; if they smelt of powder, he was cut in pieces without mercy.'

Gaming and gallantry are the prevalent occupations of the higher ranks of society; and so universal is the corruption of manners, that even the middling classes appear to be equally depraved.

'Let it however be remembered,' says the author, 'that I speak alone of Neapolitans: some foreigners have indeed introduced here the manners of their countries, and endeavour to keep them pure by admitting none but foreigners into their circles. I mention, for examples, the English minister Eliot and the Russian Countess Skawronsky. The latter has resided here several years: she gives pleasant entertainments; which, notwithstanding her great age, she seasons with her humour. No Neapolitan can gain access to her: she is only visited, as it were, by birds of passage during their flight.'

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The eloge of the Queen of Naples, the account of the unrolling of the manuscripts at Herculaneum, and the notice of Carluccio, who has cut in cork a model of the Coliseum, (the labour of thirteen years,) agreeably relieve the dark shading which we have just contemplated.

From Rome, M. Von Kotzebue quickly measured back his way by Loretto, Ancona, Bologna, Mantua, Verona, the Tyrol, Vienna, and Dresden. In this portion of his travels, the most prominent passages are, his portrait of the eastern Tyrolians and Carinthians, and of the Archduke John of Austria, his indignant strictures on the restraints which the government have imposed on the liberty of the press at Vienna, and his affecting commemoration of the intrepidity of the aged Schmidt.

We have now intimated most of the particulars which a discerning reader would select as beautiful or entertaining from this mass of unconcocted materials; and we shall abstain from the invidious task of noting minor inconsistencies. A due regard to revision might have secured to the author a distinguished rank in the walks of literature: but his peculiarity of manner, his overstrained sentiment, and his contempt of received opinions, may suffice to captivate the many, who are seldom disturbed by the admonitions of good taste, or the remonstrances of accurate judgment. Among the many, however, there are not a few who will be offended at the levity of the writer's allusions to sacred history, and will not easily pardon him for calling the 'man according to God's own heart,' *a pious old rogue.*

We have only to add that the translation, like the original, bears too many marks of hurried and careless execution. The meaning, in some instances, is inaccurately rendered, and the language is remote from dignity and elegance.

Muir.

ART.

ART. X. *Observations on the present State of the Highlands of Scotland*, with a View of the Causes and probable Consequences of Emigration. By the Earl of Selkirk. Second Edition. 8vo. pp. 232. 6s. Boards. Longman and Co. 1806.

ART. XI. *Strictures and Remarks on the Earl of Selkirk's Observations on the present State of the Highlands of Scotland.* By Robert Brown, Esq., Sheriff Substitute of the Western District of Inverness-shire. 8vo. pp. 120. 2s. 6d. Murray. 1806.

ART. XII. *Eight Letters on the Subject of the Earl of Selkirk's Pamphlet on Highland Emigration:* as they lately appeared under the Signature of Amicus in one of the Edinburgh Newspapers. 8vo. pp. 59. 1s. 6d. Longman and Co. 1806.

A YOUNG man of high rank and consideration, who, preferring the *opus utile famæ*, resists the blandishments of pleasure, and severs himself from the circles of gaiety and dissipation, confers a nobility on himself far more estimable in the eye of reason than that which he derived from a long line of ancestry. The noble person whose work is now before us, while yet a youth, employed a recess from academic studies in surveying an interesting portion of his country, the seat of antient manners, where a spirit prevailed and an economy was pursued extremely different from those which distinguish the other parts of the empire. In the Highlands of Scotland, the Earl of Selkirk found that the same changes were obtaining which had first begun to prevail in this part of the island, as early as the time of Henry VII. The abolition of the heritable jurisdictions, and the introduction of law, had rendered a tribe of retainers an useless burthen; intercourse with the South had opened the eyes of proprietors to the value of land; and the consequence was that small farms merged in large, and that pasturage (particularly with sheep) displaced a wretched and unproductive agriculture. The effect of this alteration was to deprive even of their former miserable subsistence a great proportion of the cotters and small farmers; as in England in the reign of Henry, so now in the remote regions of the North, depopulation became the subject of complaint, and in a degree it certainly was taking place. The same pressure produced the same clamour, respecting the mischief of breaking up small tenures, the heinousness of engrossing farms, and the crime of banishing the plough to make room for sheep.

The mind of Lord Selkirk was of too high an order to countenance this ill-judged cry; and while he lamented the sufferings of the individuals, he discerned the interest which the community possessed in the revolution that was gradually effecting.

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A well-wisher to the new economy, his benevolence prompted him to become the benefactor of those who suffered through its introduction; and he conceived the laudable project which was at once to provide for their comfort, and to advance his country's welfare. He found that emigration to the United States, and to the British American colonies, had been a long established and a growing practice among them; and it occurred to him to divert the current wholly to the British colonies, by holding inducements to the emigrants sufficiently powerful to determine them to take this course.—The change in the rural economy of the Highlands is an indisputable fact, and its effect in throwing numerous hands out of employ is equally clear. It follows that emigration, at least for a time, became unavoidable. Though even this were questioned, at all events it will not be controverted that the noble author found the practice prevailing; and to meditate and realize a plan for alleviating its inconveniences, for guarding against its evils, for rendering it advantageous to the state, and for diminishing its hardships as it respected the persons embarking in it, was surely a beneficent and patriotic office. By the exertions of this nobleman, difficulties in the way of effecting beneficial changes at home have been removed; and a part of the globe in which Great Britain had an interest has been converted into habitable districts, adding to the strength of the Parent State by its population, and to its wealth by its consumption. Of a claim to this merit, the most envious cannot deprive the Earl of Selkirk.

To persons not versed in the doctrines of political economy, and who are still strangers to the light which in our own age has been introduced into that department, many of the positions in this work will appear paradoxical; and though they are here luminously treated, it may be doubted whether they will engage the assent even of sensible men who possessed no previous information on the subject: but to those among whom the principles of Dr. Adam Smith and the more recent illustrations of Mr. Malthus are familiar, the volume presents not a tenet that is questionable, nor a paragraph that is obscure. The tract is by no means to be classed with ordinary productions: but precision of ideas, and correctness and felicity of style, unite with importance of matter to stamp a high value on it, and to establish the qualifications of the author to excell in the career of letters.

The feodality of the Highlands appears to have been that of the best days of this regimen, and to have retained to the last a great portion of its original patriarchal nature; very different from that which latterly prevailed in this and other countries of Europe, and which was only advantageous to the Lords, and

solely oppressive and galling to the vassal. In the sequestered districts of Caledonia, it appears that the chief treated his dependents with condescension and kindness; while, in their turn, they manifested on every occasion their devotion and loyalty to their liege.

We shall copy an able sketch of the state of things in this part of the empire, previously to the changes which followed the events of 1745.

'The value of landed property was, in these times, to be reckoned, not by the rent it produced, but by the men whom it could send into the field. It is mentioned, indeed, of one of the chieftains, that being questioned by a stranger as to the rent of his estate, he answered, that it could raise 500 men.

'Under these circumstances, it was natural that every proprietor should wish to reduce his farms into as small portions as possible: and this inclination was fully seconded by the disposition of the people. The state of the country left a father no other means of providing for a numerous family, than by dividing his farm among them; and where two families could be placed on the land that was previously occupied by one, the proprietor acquired a new tenant, and a new soldier. From the operation of these principles, the land seems, in a great majority of cases, to have been divided into possessions barely sufficient for a scanty subsistence to the occupiers.

'It was indeed usual for the head of a clan, possessing extensive territories, occasionally to grant more considerable farms to the younger branches of his family; but this circumstance had little effect on the general mode of agricultural management. The *tacksmen* (as the holders of such large farms were termed) were considered nearly in the same light as proprietors, and acted on the same principles. They were the officers who, under the chief, commanded in the military expeditions of the clan. This was their employment; and neither their own dispositions, nor the situation of the country, inclined them to engage in the drudgery of agriculture, any further than to supply the necessaries of life for their own families. A part of their land was usually sufficient for this purpose; and the remainder was let off, in small portions, to cotters, who differed but little from the small occupiers who held their lands immediately from the chief, excepting that, in lieu of rent, they were bound to a certain amount of labour for the advantage of their immediate superior. By collecting a number of these people around his own habitation, a gentleman not only procured the means of carrying on the work of his farm with ease, but also promoted the personal security of his family. Besides this, the tacksmen, holding their lands from the chief at a mere quit-rent, were naturally solicitous to merit his favour, by the number of their immediate dependants whom they could bring to join his standard; and they had in fact no other means of employing to advantage the superfluity of their land, than by joining in the general system of the country, and multiplying the ultimate occupiers of the land.

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'These circumstances produced a state of manners, from which it is easy still to trace the most striking peculiarities of the Highlanders.'

According to this noble author, the small tenures are daily extinguished, land is approaching the maximum of its value, and pasture every where gaining over agriculture, while policy and the climate sanction the changes. How slender a provision for great and pressing demands is afforded by waste lands, is well known to every cultivator; these districts are too much sequestered to warrant the expectation that any extensive manufactures will ever be established in them; and the fisheries supply not resources ample enough to provide for all the hands which the new order of things has deprived of employment. Thirty or forty families, we learn, are all at once dispossessed, in order to make way for a sheep farm; and where sheep are not introduced, the advance of the price of land occasions the farms to be enlarged. The redundancy of population, which this new course of affairs occasions, none but the wilfully blind can fail to discern; and the superfluous hands are reduced to the necessity of resorting to the manufactures of the South, or of traversing the Atlantic. The preference given by great numbers to the latter alternative is satisfactorily explained by Lord Selkirk in his usual satisfactory way; and he contends that emigration ought not to be checked, but that it is equally for the advantage of the land proprietor and the labourer that it should be allowed a free course. In no part of the Highlands, he asserts, has the new system of management come to such full maturity, as to have reduced the population to that which is absolutely necessary for the business of the country; and having his mind stored with all the principles which affect this subject, he shews that all fears of a depopulating and injurious emigration are ridiculous and chimerical.—As we had the pleasure of contributing our part in introducing to general notice the valuable services of Mr. Malthus, we share in the satisfaction which that gentleman will feel in the appropriate praise bestowed on them by the noble and accomplished author whose work we are considering. We insert the testimony and the facts adduced as corroborative of the doctrine here maintained:

'On this subject it will be sufficient to refer to the valuable work of Mr. Malthus on the Principle of Population, in which these arguments are traced to such uncontrovertible general principles, and with such force of illustration, as to put scepticism at defiance. I may be allowed, however, to state one or two facts, which, while they add to the mass of concurring proofs which Mr. Malthus has quoted, may serve to shew how immediately his principles are applicable to the particular case of the Highlands.

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'By the returns made to Dr. Webster, in the year 1755, the seven parishes of the Isle of Sky contained 11,252 inhabitants. By those to Sir John Sinclair, between 1791 and 1794, 14,470. Some time after Dr. Webster's enumeration, the emigrations commenced, and, since the year 1770, have been frequent and extensive. A gentleman of ability and observation, whose employment in the island gave him the best opportunities of information, estimates the total number who emigrated, between 1772 and 1791, at 4000. The number who, during the same period, went to the Low Country of Scotland, going in a more gradual manner, and exciting less notice, could not be so well ascertained; but from concurring circumstances he considers 8000 as the least at which they can possibly be reckoned.

'Notwithstanding this drain, it appears that the natural tendency of population to increase has more than filled up the blank; and if, to the numbers which have left the island, we add the increase which has probably taken place among them also, in their new situation, we cannot doubt that there are now living a number of people descended from those who inhabited the island at the period of Dr. Webster's enumeration, at least, double of its actual population. Now, let it be supposed, for the sake of argument, that the whole of these could again be collected within the island: will the wildest declaimer against emigration pretend to say, that it could afford support or employment to them all? when its actual numbers are an oppressive burthen, what would be the case if such an addition were made? Can it possibly be believed, that, if the emigrations had not taken place, the same natural increase would have gone on? and does not this instance demonstrate, that to restrain emigration would only be to restrain the principle of increasing population?

'Another instance of a similar fact is quoted by Mr. Irvine. It was communicated, he says, by a gentleman of unquestionable veracity, who relates, from his personal knowledge, that 'in 1790, a place on the west coast contained 1900 inhabitants, of whom 500 emigrated the same year to America. In 1801, a census was taken, and the same spot contained 1967, though it had furnished 87 men for the army and navy, and not a single stranger settled in it.'

The proceedings of the Highland society, the policy on which they appear to act, and the statute relative to emigration, the enactment of which they have procured, undergo in these pages a strict examination, and forcible though temperate and candid animadversions. The emigrant bill regulates the number of passengers, and the quantity of provisions which each shall lay in; by which the expence of transport has been enhanced much more than was necessary, according to the conceptions of Lord Selkirk. To no evil is a state constituted like our own so liable, or against which it is so difficult to guard, as that of superfluous legislation. It is not every malady which we observe in society that warrants the application of the grave and costly remedy of a new law. If we find the mischief to be even considerable, let us recollect that scarcely any evil is more

serious than that which arises from an infinite accumulation of laws. In the present instance, it does not seem that the intervention of the legislature was in any way necessary; and certainly, if it *was* requisite, it ought not to have extended beyond the regulation of the number of passengers to be taken on board: but, as it now stands, it prevents from emigrating those to whom emigration is most an object, namely the lowest poor. Persons who have studied the principles of our common nature, and who have reflected on the effects of early habits and associations, will never be disturbed by intelligence of emigrations. It is almost impossible that they should ever extend to any hurtful degree: but should that improbable event in any case occur, we have not now to learn how soon the mischief is repaired, and how speedily the chasm is filled up. Justice, however, will not be done to the noble author before us, if he be charged with inciting to emigration. What he has done has been to give a humane and patriotic aid and direction to a course which circumstances, with which he had nothing to do, had prompted; and which they warranted and justified. The diminution of discontent at home, and the importance of a loyal well affected colonial population, are so obvious, that we shall merely refer to what the author says on those ~~topics~~ heads.

Emigration is a great topic; it presents much on which philanthropy and enlarged policy may speculate: but these are matters at which neither our limits nor our province allow us at present even to hint. We would only observe that, as we conceive, in no districts of the empire would occasional emigrations be injurious; and that, judiciously directed, settled, and fostered, they might be made in a high degree to extend the power and advance the prosperity of a state, whether directed to increase its subjects or its allies.

Surveying this subject in every enlightened view of which it is susceptible, Lord Selkirk was induced, he observes in his *Introduction*, to communicate his sentiments to some persons then in Administration, respecting 'the necessity of active interference for attracting the emigrants to our own colonies.'

'These representations were treated with polite attention, but did not excite an interest corresponding to my own ideas of the importance of the object. Inasmuch, however, as it could be promoted by the disposal of waste lands of the Crown, I was informed that every reasonable encouragement might be expected. Seeing no probability of my views being effectually adopted by Government, and reluctant to abandon the object altogether, I was led to consider how far under the encouragement held out, I could, as an individual, follow it up on a more limited scale, to the effect at least of establishing the practicability of my suggestion. Having, therefore, received the assurance

assurance of a grant of land on such terms, as promised an adequate return for the unavoidable expences of the undertaking, I resolved to try the experiment, and, at my own risk, to engage some of the emigrants, who were preparing to go to the United States, to change their destination, and embark for our own colonies.'

In the course of the work, we have a neat and interesting narrative of the steps taken by the Earl to realize his favourite plan, and of the incidents which attended its progress. He thus prefaces his account:

'When the general principles already laid down are understood, the part which I have myself taken, in regard to the settlers whom I conveyed, in 1803, to Prince Edward's Island, will need little explanation. Of these settlers, the greatest proportion were from the Isle of Sky; a district which had so decided a connexion with North Carolina, that no emigrants had ever gone from it to any other quarter. There were a few others from Ross-shire, from the North part of Argyle-shire, and from some interior districts of Inverness-shire, all of whose connexions lay in some part of the United States. There were some also from a part of the Island of Uist, where the emigration had not taken a decided direction.'

We shall select a few passages, without introduction or comment, from this interesting relation.

'There cannot be a more extreme contrast to any country that has been long under cultivation, or a scene more totally new to a native of these kingdoms, than the boundless forests of America. An emigrant set down in such a scene feels almost the helplessness of a child. He has a new set of ideas to acquire: the knowledge which all his previous experience has accumulated, can seldom be applied; his ignorance as to the circumstances of his new situation meets him on every occasion. The disadvantages to which he is thereby subjected are so great, that emigrants who are taken at once from Europe to such a situation, and abandoned to their own exertions without aid or guidance, rarely avoid involving themselves in inextricable difficulties. To settlers of this description, success can be insured only by well calculated arrangements, and an unremitted attention in directing their efforts.'—

'When the new settler is fixed on his land, his difficulties are not at an end: he is still exposed to much waste of time, and can seldom proceed in his work without interruption. He must first procure provisions; and, though no pecuniary difficulty should occur, he generally, from his ignorance of the country, loses more time than necessary in this business. In bringing them home, he often finds himself much at a loss, from the wild and almost impassable state of the roads through the woods; the same difficulty occurs whenever any article, however inconsiderable, is wanted from the mill, the forge, or the store. From the want of a general attention to keep the settlements compact, and within reach of mutual assistance, most of the people who begin on new and untouched land, are reduced to a situation of more than savage solitude. The new settler from Europe is

unacquainted with the methods, by which a practised *woodsman* can find his way through the trackless forest. Every time he leaves his hut, he is exposed to the danger of being bewildered and lost; if he has been sufficiently warned of this danger, to teach him the requisite degree of attention, still he can feel no confidence that his children will have the same caution; and must still shudder, when he thinks of the howling wilderness that surrounds him. The horror of these impressions has, in many instances, completely un-nerved the mind of the settler, and rendered him incapable of any vigorous exertion.'

In little more than one year from the date of their landing on the island of St. John, now called Prince Edward's, the settlers had made themselves independent of any supply that did not arise from their own labour. The noble founder, speaking of his new colonists, modestly observes that

'To their industrious dispositions and persevering energy, the highest praise is justly due. Without these, indeed, every other advantage would have been of no avail; for, if the arrangements that have been detailed have any merit, it may all be comprised in this,—that by their means the industry of the individual settlers was preserved unimpaired, was allowed full scope to exert itself, and was so directed as to produce all the effect, or nearly all, of which it was capable.'

The following extract will naturally close our account of this very valuable production:

'So many instances are quoted of the ill success of Europeans, when placed at once in the heart of the wild woods, that I have heard several gentlemen, of the highest abilities and experience in the United States, pronounce an unqualified opinion, that a new settlement could not be formed without a basis of native Americans

'The decisive experimental proof to the contrary, that has been stated in these pages, seems to me of some public importance. It shews the advantage that may be derived from a class of people, who have hitherto been lost to their native country, and abandoned to their fate in a foreign land. It proves that, though of little service as manufacturers, they may be made excellent colonists; and that our North American possessions may be peopled and brought into cultivation, without introducing into them men, whose manners and principles are so repugnant to our own constitution and government, as those which are prevalent among the natives of the United States.'

As writers and reasoners, the authors of the two pamphlets included in the present article stand at a great distance from the noble person on whose sentiments and conduct they animadvert, in a temper not the most amiable. They chiefly challenge attention, however, as disputing Lord Selkirk's facts. The author of the *Strictures* denies that the bent of the Highland emigrants is principally in favour of the United States; and according to him the current was chiefly directed towards the

the British settlements: but the Earl's statements, we observe, are opposed only by assertions. It is remarked also by Mr. Brown that the greater part of the surface of the Highlands is uncultivated, and that none of it undergoes very improved culture. We do not see how this circumstance affects the reasoning of Lord Selkirk; nor do we apprehend that it concerns his Lordship to deny that particular districts of the Highlands are not over populous, or that they are even susceptible of an increase of population. Nor is it necessary to dispute that inaccurate and exaggerated accounts, and fanaticism, have swelled the numbers of emigrants: but would these causes have occasioned one single individual to forsake his native land, had not other predisposing and powerful motives existed?—In the anonymous author of the *Eight Letters*, zeal greatly outruns knowlege. Both he and his colleague wish well to the country; and the loyalty and patriotism of their intentions may be allowed to close the lips of criticism, when no possible inconvenience can arise from silence. The effusions of their pens will in no degree impede the success of a performance, which contains such impregnable proofs of its author's sound general principles, of his extensive information, of his accomplishments and talents, and of the wisdom of his conduct in difficult and important proceedings.

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ART. XIII. *A Treatise on the Pleas of the Crown.* By Edward Hyde East, Esq. of the Inner Temple. Vols. I. and II. 8vo. 1l. 18s. Boards. Butterworth.

WE have very lately had occasion to observe, that in no science are the treatises which have been written concerning it so imperfect, inartificial, and unfinished, as in that of the law; a circumstance for which it seems not easy to account, whether we consider the subject itself, or the inducements to render justice to it; for what subject more invites felicity of statement, closeness of reasoning, and the perspicuity, grace, and elegance of which the didactic style is susceptible? The *Commentaries on the Laws of England*, which form in this respect one of the first models in our language, may be adduced as a striking instance in support of our observation; and, in the style of which we are speaking, were we asked whose manner we should wish to make our own, we should without hesitation give the preference to that of Blackstone. Could it happen that the laws of England were abrogated or had become obsolete, and the language had survived, this great writer would not only be read, but most diligently and sedulously

studied by scholars on account of the purity and neatness of his diction.—Why is this admirable model so invariably disregarded by writers on law subjects? Surely no branch of composition offers stronger incitements to produce *chefs-d'œuvre.* Practice, consideration in a respectable society, and professional honours, await the successful candidate; while in addition his labours are accompanied by the pleasing consciousness of great service rendered to the public, in elucidating and facilitating the application of doctrines on which our lives and fortunes depend, and the discussion of which is in itself a fine discipline for the mind. The department of the law is besides filled for the most part by scholars, by enlightened and accomplished men, enured to habits of application; many of whom are not in a condition to plead the avocations of business. How happens it, then, that in an occupation so circumstanced, every production is so ordinary, and that scarcely one appears which reaches even mediocrity? The short answer is, there is a more compendious, an easier, and a surer way to all that is most flattering in the profession.

As to the work before us, we freely own that, when we observed the name which was prefixed to it, our expectations were not high; the tedium, the jejuneness, and the redundancies of the author's *Reports* became instantly present to our minds: but we are happy to state that our prepossessions were not justified. The laborious reporter has here shewn himself capable of far greater things than any of which his fasciculi gave the least promise, and he has presented to the world a production which is intitled to the praise of accuracy, neatness, and conciseness;—a classical performance in its kind;—a performance which, whether we regard the matter or the manner, is not unworthy of the high objects to which it relates; which is calculated to remove the reproach brought on legal literature by former essays in the same line; and which induces a hope that, in future, more merit will be discoverable in this range of the human intellect.

The account given by Mr. East, in his preface, of the state of the subject, and of his mode of treating it, is at once so candid and so just, that we shall without the least scruple adopt it as our own, and submit it as such to our readers, pledging ourselves for its correctness.—He observes;

'I should have considered it an unbecoming presumption, as well as an unnecessary labour, had I ventured without additional materials, on a new arrangement and discussion of the subject of these volumes, already so ably and authoritatively treated by Lord C. J. Hale, and Mr. Serjeant Hawkins. But it is now near ninety years since the last of those authors published his valuable work, and the accumulation

tion of new matter, both by statutes and adjudged cases, is become so great, that a revision of this most interesting branch of our law would, I thought, be an acceptable offering to the members of my profession, however far the execution of it might fall short in point of ability of models which they have been accustomed to contemplate. It may be said that much has already been done toward the completion of what I have proposed by the excellent discourses of Mr. Justice Foster, by the notes which have from time to time been added to the several editions of Serjeant Hawkins's work, and by a collection of cases on the crown law published within a few years past by Mr. Leach.

'With respect to the first of these, it is greatly to be lamented, from the specimen which that learned Judge has given of his talents in this species of writing, that he did not take a more general view of the criminal law, which he seems at one time to have meditated. Had he extended the same attention to other parts of it, as he has done to the subjects of High Treason and Homicide, this or any other treatise of the like sort would have been much less wanted. His searching and well poised mind would have cleared many of the difficulties which have impeded my progress, and the authority of his opinion would have settled many doubts which I have only ventured to suggest or at most to hint a solution of.

'With regard to the additions made to the subsequent editions of Hawkins, however serviceable as notes and references, yet from the very nature of such materials they are for the most part little calculated to give that complete and satisfactory information, which is essentially requisite to be obtained without delay in criminal cases.

'The publication of Mr. Leach's reports is of another description. About a twelvemonth or more before that made its appearance, I had begun to make a collection of Crown MSS. with a view to a work of this kind at some distant period, and had been furnished with many of the cases which are to be found in that book, particularly by the late Mr. Justice Buller; who encouraged me to undertake the publication of them, provided I could obtain the consent of the other Judges, without which he did not feel himself at liberty to do more than to furnish me with copies for my own information and amusement. While I was deliberating upon his proposal, Mr. Leach's book was first published, which removed part of the difficulty I had felt in making the desired application to the Judges; and soon afterwards in the course of July 1789, Lord Kenyon, by the consent of the whole bench, gave me permission to take a copy of that collection of cases, of which as chief Justice of the court of King's Bench he was the depositary, and which will hereafter be mentioned in the list of MSS. referred to in the subsequent sheets. From several of the other Judges I also received the most liberal communications of their own MSS., and particularly from Mr. Justice Gould, whose venerable years and indefatigable professional labours had given him more opportunity than any other of making a large collection of cases within his own time. These MSS. as coming from the most authentic sources, carry with them the greatest authority. If, however, my intention had been merely confined to publish a collection of Crown cases,

it is probable that Mr. Leach's book would have made me refrain, from a consideration since justified by the event, that whatever inaccuracies first appeared in that volume, the principal at least would be soon corrected in the subsequent editions. But as my intentions went farther, and I had originally proposed to exhibit the modern decisions in the shape of notes to Lord Hale's Summary, taking that as the groundwork of the arrangement, on account as well of its authenticity, as its brevity, the printing of many of those decisions, together with the accumulations of additional matter, stimulated me to enlarge my plan, and to take a more general view of the criminal law; in which I was further encouraged by the friendly communication of other MSS. as soon as my design was known, from many gentlemen, whose names I should be proud to connect with my own if I were at liberty so to do.

'In drawing the outline of this treatise, I have endeavoured as much as possible to class together kindred offences. This has led me to depart in some instances from the more usual arrangement; but the convenience in practice from bringing together approximating offences into one view and in the same volume, will, I trust, compensate for such deviation from the beaten path. For this purpose I have first classed together all offences against religion and the church establishment. Next such as touch the person and majesty of the King, and the allegiance due to him as the supreme magistrate of state. This class of course includes several offences inferior to High Treason, though of the like tendency, which are noticed in the progress of the principal enquiry. Next are classed offences immediately against the *person*, amongst which I have ranged such as relate to forcible, clandestine, and illegal marriages, for the reasons hereafter suggested. Then follow offences immediately against *property*, beginning with those the principal object of which is the gain of the offender, and which are said to be done lucri causa, and ending with those instigated by mere malice, including such as are of a mixed nature. These conclude the two first volumes which are now published. A third volume, which is in considerable forwardness, will include the offences of which I had not already treated, and conclude with a general view of the practical progress of criminal proceedings, from the arrest of the offender to the final consummation of the law.'

Mr. East farther informs us that it had been his wish to have brought this work into a narrower compass, but that this end could not be obtained without greatly lessening the utility and value of the materials. It is well known, he remarks, to every lawyer, that in criminal matters an abbreviation of an adjudged case is rarely satisfactory, and that of a statute is nearly useless. Though the marginal abstract of a case will often give the full substance and effects of it, yet the case itself in almost every instance cannot with any propriety be omitted. Professional men can only be satisfied with authentic information of the decision, and must be unwilling to lose the precise and formal precedent, which has its use.

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'The importance and necessity indeed of having the most correct information at hand are sufficiently obvious to those who practise at the crown bar, where it is most usual and always desirable for the ends of justice, and the influence of example, as far as certainty can be reasonably obtained, that the trial which commences should without intermission be definitively concluded by judgment. Without losing sight of those most important objects, a faithful transcript of all the operative parts of the statutes in question, and an authentic statement of the adjudged cases, I have endeavoured to abbreviate all general matters which are of common notoriety, and are treated of in other well known books.'

Whoever maturely and attentively peruses the several heads, which these volumes embrace, will find under each the offence defined, its limits ascertained, and the effect of circumstances determined, with accuracy and precision; while its relation to principles is explained, and the qualifications and limitations which decided cases have given to these principles are clearly specified. The judgment of the author is not less conspicuous in the production of authorities, whether legislative or judicial. In short, the student, who will familiarize himself with the contents of these volumes, at the same time assiduously attending our criminal courts, may hope in a reasonable period to qualify himself for discharging, to his own satisfaction and the benefit of his clients, the anxious duties which belong to this branch of the practice of the law.

Should it be observed that, on this occasion, we have rather exceeded the limits within which we usually confine articles of this sort, we plead in justification that the performance is distinguished by literary as well as legal merit; and we cannot dismiss it without congratulating the learned and indefatigable author on the claim which he has here incontrovertibly established to the acknowlegements of the public, the gratitude of the profession, and (in our humble judgment) to a participation of its honours.

Jo.

ART. XIV. *The Present State of Peru:* comprising its Geography, Topography, Natural History, Mineralogy, Commerce, the Customs and Manners of its Inhabitants, the State of Literature, Philosophy, and the Arts, the modern Travels of the Missionaries in the heretofore unexplored mountainous Territories, &c. &c. The whole drawn from Original and Authentic Documents, chiefly written and compiled in the Peruvian Capital; and embellished by twenty Engravings of Costumes, &c. 4to. pp. 487. 2l. 2s. Boards. R. Phillips. 1805.

THE singular discovery and extraordinary conquest of the country of which this volume professes to give the present

state, together with the influence which its possession by an European power has manifested on the civilized world, and our scanty knowlege of it, combine to create a strong interest in favour of all that relates to it. We regret, therefore, to say that the title of the work is more calculated to excite than its contents are adapted to satisfy curiosity. One merit, however, we cannot deny to this production; we mean the absence of all disguise in the statement of the materials of which it has been constructed. It seems that, in the Spanish ship the St. Jago, which was captured in 1793, were found several volumes of "*El Mercurio Peruano*," a newspaper which was published twice in a week at Lima; and the present volume, it appears to us, is little more than a digested aggregate of extracts from these Peruvian papers.

Under the various classes specified in the title-page, we meet with that species of vague and desultory information which periodical journals usually afford. As favourable specimens, we shall submit to our readers a few extracts from the account of the customs and manners of the Peruvians. The passage displays at once the free spirit which has sprung up among that people, and the restraints which are imposed on it by the mother country:

'To illustrate this subject, and at the same time to avoid giving offence, the authors of the Peruvian Mercury have had recourse to an ingenious allegory, which they entitle "An Historical Apologue on the Corruption of the Roman Colonies in Africa," and the application of which will be readily understood. It is introduced in the following manner.

'The historical department, the first in the order of our publication, demands from us a decided preference. It has therefore been our wish to possess all the valuable materials contained in the archives, so as to be enabled to enrich and adorn it. For this purpose we have purchased a prodigious quantity of manuscripts, which had hitherto been consigned to the dust, and to oblivion. On the afternoon of the day before yesterday, we were engaged in examining them, when the censor of our society threw out the idea of compiling and publishing a history of the public morals of these countries. We instantly repelled the thought, not only on account of the arduousness of the undertaking, but likewise of the risk of its not being acceptable, or taken in ill part. Our associate insisted that his proposition should be adopted; but we employed all our eloquence to persuade him that our apprehensions were well founded. A fortuitous accident enabled us to terminate the dispute. It chanced that among the above-mentioned manuscripts we met with a parchment half eaten by the worms, but whether from the pen of Tacitus, Florus, or Suetonius, is uncertain. Its context appeared to us to be very analogous to the subject under discussion; and we therefore agreed to translate it literally, so far as it was legible, and to publish it, with a view to see whether

whether this respectable public is sufficiently docile to receive, without displeasure, corrections of a similar nature. It bears the inscription which has been already pointed out, and begins thus:

" ——— *Quid rides? Mutato nomine de te*
Fabula narratur. Horat.

" When the invincible Scipio destroyed Carthage, all Africa became subject to the Capitol. The spirit of enterprize inspired an ardent longing for certain regions which were in a manner inhabitable. There were entire nations who preferred the shores of Numidia to those of Italy. Many cities were founded The parched Carthaginian, and the naked Lybian, saw certain virtues, which had hitherto been unknown, flourish in their soil.

" The rigid integrity which is characteristic of a republican heart, shone in these colonies as at Rome. Proud of the glorious title of a Roman, each individual, whatever might be his age or condition, sought to merit, by his heroical exploits, the honour which that name conferred on him. The matron, content in the retirement of a *disabused* time of life, looked forward with anxiety to the relation of the military prowess of her sons. The wedded female had no other delight than that of rearing the fruits of her conjugal tenderness, and moulding them into good citizens. The damsel, full of innocence, was a stranger to love until the happy moment when Hymen revealed to her its mysterious secrets. She fancied that this sentiment was merely a recompense due to the valour of some youthful lover, who viewed her with impassioned eyes when he returned from the war laden with the spoils of the enemy.

" The frailty and inconstancy inherent in our miserable species, were too powerful for the virtue even of the Romans, and operated a change in these fine principles. Riches and voluptuousness were the fatal instruments; and the degeneracy of the colonies found its punishment in the moral and physical calamities which supervened.

" Enriched by the treasures of Annon, Amilcar, Syphax, and the other subjugated kings and generals, the Romans began to view with disgust the severity of the ancient customs they had brought from Europe. Frankness, sobriety, valour, and constancy, were virtues which gradually became relaxed, and yielded at length to dissimulation, rioting frivolity, and sloth. For the rural and domestic labours, they tore from their fire-sides and household gods, the Nubians, Egyptians, and Abyssinians. The martial laws, the right of conquest, and the example of other nations, gave a legitimacy to this description of tyranny.

" The enervation of the Romans was infused, in an immediate way, into their wives; and they contributed to augment and perpetuate it. The Portias, Cornelias, and Lucretias, highly gratified at being relieved from their domestic duties by the African female slaves who surrounded them, laid aside the needle, and the spindle, delivering themslves up to vanity, and finally concentrating all their delight in the intrigues of Cupid. They were in need of secret agents and confidants; and for this purpose made choice of their bondwomen. The

latter,

latter, constitutionally degenerate, and less conspicuous on account of the parity of colour, were better calculated to go abroad, to maintain an epistolary correspondence, and to promote a furtive introduction. Insensibly, those who had before served them in the meanest capacities, found themselves the depositaries of the confidence of their ladies.

" On another hand, these same Roman women, at whose breasts had been nurtured those who in the sequel gave laws to the whole world, viewed with disdain the noble occupation of suckling and rearing their infants. They confided this trust to the female slave, who saw hanging at her neck him who was destined to be one day her lord.

" Behold thus the monstrous Egyptian women at one and the same time the sovereign disposers of the life of those to whom they appertained, and of the honour of their mistresses. Elated by this double motive, they emulated the Roman females themselves, in their dress, their language, and even in their pleasures. The youth whose beard began to form itself, feeling as it were an attachment to his puerile dependency, viewed with tenderness and complacency a cast whose milk was his first aliment. The husband, dissatisfied with the cold retribution of a divided bed, sought a compensation in the female slave. The horror of his loathsome crime was confounded in the obscurity of his accomplice. The mixture of the specieses became common, and thence originated the various sub divisions which are more or less valued in proportion to the degrees of proximity or distance from their original colour. These spurious fruits of an abominable union ceased already to be useful in the domestic occupations, or performed them with an air of superiority. The fashions, personal merit, and the education of the youth, were swayed and directed by these vile souls. Their influence, and the common depravation, were carried to such a length, that the Roman women, even these Romen women, gloried in having some resemblance, either in the mind or person, with their female slaves...."

' Here the parchment was so much worm-eaten, that it was impossible for us to ascertain to what length these declamations may have been carried. In one respect we congratulated ourselves on this circumstance; for if the author of the manuscript had been enabled, through us, to explain himself still further, his translators might have been exposed to the risk, that this noble public, and the persons engaged in its service, might regard this fragment as a metaphorical satire, which certainly never entered into their thought.'

In the next passage, we behold certain features of the Peruvian fair, which are doubtless not very prepossessing:

' I now saw a new prodigy, still more awful than the former: enveloped in a cloud partly azure and partly of a golden hue, a figure resembling a human being stood before me. I fancied it to be the goddess; but in an instant the old man, as if he had divined my thought, said to me: " Thou art mistaken: this is not ASTREA, but the celebrated EUGENIA, who having in the world the reputation of being the most lovely of women, is come hither, to the end that we may confirm her in that opinion. Approach, take heed, hear, profit, and be silent."

"As soon as I had a near view of the nymph who had appeared to us, I exclaimed: "Eternal Heavens, what do I see!" I was unable to say more, my senses having been subdued by terror. I perceived a creature of my own species, but of a different sex, beautiful as a goddess, or more than a goddess, if that be possible. Her long and black hair was confined by small and numerous tresses; it scarcely flowed with freedom on the shoulders, and there, forming graceful ringlets, played with the wind, or with the motions of the body. Her eyes were black and piercing. Her eye-brows, of the same colour, regular, and thickly planted, set off to still greater advantage the perfect whiteness of her face:—of a face which appeared to me so beautiful, and so divine, that the Peruvian ladies alone could vie with her in symmetry of features. The arms, well turned, full and delicate, terminated in hands of equal perfection. The other parts of the body remained concealed in the dense substance of the cloud, so as to prevent me from ascertaining, by the particulars of her dress, the nation and country to which this prodigy of beauty might belong.

'Without being able to contain myself, I said to the old man, my guide: "If you and ASTREA be just and dispassionate judges, you cannot deny to EUGENIA the title which she claims, of possessing an incomparable assemblage of graces."—"Ah! inexperienced youth," replied the scrupulous elder; "enraptured youth, thy admiration would be just, if all the beauties thou viewest were inherent and natural, and were not counterbalanced by affectation and imposture. Observe attentively: that white which surprizes thee so much, is a thin coat of arsenic or white lead, laid on with art, and in a manner glued to the skin. This is a despicable custom in any other nation; but among the countrywomen of EUGENIA, it is absolutely criminal, seeing that, by its adoption, they injure and tarnish their natural whiteness, that surprizing whiteness which excites the envy of all the other ladies in the world. Art thou desirous to see the mischiefs by which this detestable paint is accompanied? Remark the forehead, which has a somewhat disproportionate width: it proves that the hair has fallen off at the temples, by the friction of this vile ingredient. Observe, now that she smiles: she has several decayed teeth; and if it were lawful for thee to approach her, thou wouldst be sensible that her breath even is in some measure vitiated. All these are consequences of the same abuse."

"The hands," exclaimed in continuation the scrupulous censor, "those hands which, physically, are beyond a doubt well shaped, delicate, and handsome, have, in a moral point of view, several very notable defects. Those honourable marks which the use of the needle, or of the distaff, occasionally leaves, are not to be traced on them. Among her countrywomen, it is considered as derogatory, to know how to take up a loop in a stocking; and but few are to be found who are able to embroider a pair of ruffles, for the husband, or for the boys. The discoloration which is so perceptible at the tips of the thumb, fore-finger, and middle finger of the right hand, is owing to these extremities being regularly made to answer the purpose of the fork, in the repasts:—a filthy practice by which the strongest stomach must

must be nauseated. Fortunately, however, this indelicacy is not to be found among certain principal nymphs who are the flower and the glory of that highly favoured country. So long as EUGENIA and her few culpable companions shall persist in this uncleanly custom, they will not merit my prepossession, nor the suffrage of Justice."

The following picture of religion, from a Spanish pen, will occasion some surprize in the attentive reader:

'Divine Wisdom discovered to Europe this valuable part of the globe, and transferred its dominion, by the right of conquest, to Spain. Instantly the sonorous voice of her apostolic ministers was heard on every side, and the law of christianity was promulgated. The clash of arms counteracted the first impressions: the Peruvian even doubted of the soundness of a law which was occasionally profaned by those who gloried in professing it, and who fancied themselves inspired by it in all their enterprizes. The Peruvian gave to the God of clemency the worship to which he was bound by his chains, but preserved at the same time an affection for his ancient idols. He concealed them beneath the most sacred representation of the Catholic religion, to direct his prayers to them, while the Spaniard thought that the efficacy of these prayers would ensure him a ready access to heaven. Happily those times of calamity and bloodshed ceased; and, peace being restored to this highly favoured soil, the respectable prelates, the fathers of the Peruvian church, were seen to direct their steps on every side, not like the thunderbolt which carries terror in its train, but like the lovely light of the morning, dissipating the dark shades of ignorance, instilling confidence into every breast, and presenting the august spirit of religion beneath the semblance of the charity which constitutes its essence.'

Under the head of topography, we find some descriptions which form material additions to our stores of geographical knowlege, as well as interesting historical information.—In treating of the state of literature, we have an account of the print which has furnished the chief materials for the present work; and of some other periodical publications. The Lima journal was suppressed in 1796.

While we hail the dawn of knowlege among an oppressed people, and applaud their attempts to advance in literature, it by no means follows that we should bestow praise on an English editor who is little more than a mere translator, who has shewn no judgment in selecting his materials, who has carefully preserved all the errors of his originals, and who has copied into his pages all their deformities: we refer to the diffuseness, the shallowness, the pedantry, and the bombast which invariably mark the first literary essays of an ardent people. We admit, however, that, in this *silva*, objects are occassionally scattered which well deserve to fix the regards of the wearied wanderer; and its numerous coloured plates afford striking representations of the characters depicted. Yet we can-

not suppress the remark that these engravings, and elegant paper and typography, bestow an expensive pomp on the publication which its merits do not warrant:—a practice which is become much too common in the present dearth of literary performances of real merit.

Jo.

MONTHLY CATALOGUE,

For AUGUST, 1806.

NATURAL HISTORY, &c.

Art. 15. *A Mineralogical Description of the County of Dumfries.* By Robert Jameson, Regius Professor of Natural History, and Keeper of the Museum in the University of Edinburgh, &c. &c. 8vo. pp. 210. 6s. Boards. Edinburgh, Bell and Co.; London, Longman and Co.

When the Duke of Buccleugh, and the gentlemen of landed property in Dumfriesshire, selected Professor Jameson to examine the state of fossil productions in the county, they no doubt expected that they were to be favoured with a tolerably complete enumeration of the earths, stones, and metals included within the prescribed range of examination. The present publication, however, if viewed in the light of a topographical mineral survey, is extremely lame and imperfect. Sometimes, the author laments his want of leisure, and sometimes he devolves the task of *future* investigation on his brother. Most of the substances which he mentions, and their precise localities, were already sufficiently known to the inhabitants of the district.—The observations on transition rocks and on those of floetz-trap formation, with the frequent allusions to the geological appearances of various foreign countries, and the untranslated French and German passages which are introduced in support of general doctrines, may be new to many: but they are irrelevant to the design of a report, of which the excellence should consist in an accurate examination and a distinct recital of facts. As the learned Professor intimates his intention of reviewing other counties in the north, we would most earnestly recommend a strict abstinence from Wernerian dogmas, and an exclusive attention to the delineation of existing appearances. By a scrupulous adherence to this advice, he may be enabled to communicate a faithful transcript of the mineral contents which he undertakes to register, and thus render a very important service to his country and to the public. In his Lectures, or in separate dissertations, he may, if he pleases, compare the facts with those favourite notions which he seems to have imbibed at Freyberg: but they who are interested in the results of his perambulations will be more obliged to him for a single fact, than for whole pages of hypothetical and pedantic reasoning.

The style of this little tract, though far from elegant, is less obnoxious to criticism than that of the first volume of the author's systematic work, which we lately noticed.

Muir. Art.

Art. 16. *A Treatise on the External Characters of Fossils.* Translated from the German of Abraham Gottlob Werner, Counsellor of Mines, Professor of Mineralogy, Public Teacher of the Art of Mining in the Mine Academy of Freyberg, and Member of several learned Societies. By Thomas Weaver. 8vo. pp. 332. 8s. Boards. Printed at Dublin. Longman and Co. London.

Since the year 1774, when the celebrated Professor of Freyberg first published his mineral characters, various discoveries have been made, and various enlargements and alterations of his nomenclature have been suggested As the author's numerous engagements have hitherto prevented him from giving a new and improved edition of his outlines, Mr. Weaver 'has had recourse to other sources to supply the deficiencies of the original. These are, principally, copies of Mr. Werner's manuscript corrections and additions, as circulated among his pupils; notes taken during his lectures in 1791, 1792; and the mineralogies of his disciples Wiedenmann and Emmerling;—and, to illustrate the extraneous forms of fossils, the manual of natural history of Professor Blumenbach has been consulted.

'In the denominations given to the Characters, and to the fossils employed in illustration of them, the translator has commonly followed Mr. Kirwan; to whose valuable labours, mineralogy in general is so much indebted.

'The Characters are tabularly arranged in the system with the corresponding German, presenting a connected view of their relations to each other; and of the Fossils, an alphabetical index is added, accompanied by their German synonyms, and with references to the several sections in which they are employed, as illustrative examples of the external characters.

'In order to elucidate the subject of crystallizations, two plates of crystalline forms are added, and explanations of the figures annexed.'

Such is the plan, which Mr. Weaver has executed with precision and neatness. To attempt an analysis or abridgement of a series of terms and definitions would be equally irksome and unavailing. We shall be contented, therefore, to extract a few sentences, in order to exemplify the translator's manner and style.

§. 92 —'*Matraciform.* This rare particular external form is composed of single, or coalesced, columns, adhering by the slighter end, and terminating in elongated globules. The denomination is derived from its resembling, in figure, the matrass of chemists. It occurs in Black Hœmatites, Brown Hœmatites, and compact Grey Ore of Manganese.

§. 161.—'Petrifactions of the crustaceous order of vermes include Echinites, Asterites, Encrinites, and Pentacrinites.

'Petrifactions of the complete Echinus are very rare, the body and spines being generally found detached from each other. The most usual petrifactions are nuclei, commonly consisting of siliceous substances, particularly flint, more rarely of chalk or calcareous matter, though most frequently imbedded in chalk. Of several Echinites, the originals are still unknown.

'Of the Asterias, or Sea Star, the petrifactions commonly met with possess five rays, seldom more than ten.

'Petrifactions

'Petrifactions of the complete Encrinus, as consisting of the head or body, the pentagonal articulated stem, and cylindrical jointed arms, are extremely rare. The parts most commonly found in the mineral kingdom are the Asteriæ, or Star-stones, either single or jointed as forming a part of the main stem. The petrified head is more rarely met with; in this state, its six dichotomous branches are closed up together, and bearing some resemblance to the form of a lily, it has obtained the name of Lily-stone. To a marine animal of the same genus, but of a different species, it is probable that the Trochites and Entrochites belong, being sometimes found attached to a head resembling, in some measure, that of Encrinus, possessing also similar arms, but differently disposed on the stem. The Trochites, also called St. Cuthbert's Beads, are the single joints; the Entrochites, parts of the jointed stem, being, like the arms, cylindrical. Encrinites are generally found imbedded in compact limestone, sometimes in hornstone, and usually consisting of calcareous spar; but nuclei of the Entrochites, commonly called Screw-stones, are sometimes composed of iron stone, horn-stone, or quartz.

'Pentacrinites, of which the most remarkable petrifactions occurred formerly in the Wirtemberg dominions, and principally near Ombden, in bituminous-marlite, are extremely rare. The Pentacrinite consists of a large body divided into many branches, and affixed to a simple jointed stem destitute of arms. Its original is unknown.'

As we have already more than once hazarded our sentiments on the general merits of the Wernerian arrangement, we need not here indulge in repeating them. To the appropriate divisions and language of this arrangement, the translator has furnished his English readers with a very commodious key, which may probably supersede more cumbersome explanations. *Muir.*

Art. 17. *The Botanist's Guide through the Counties of Northumberland and Durham.* Vol. I. 8vo. pp. 123. 3s. Boards. Mawman. 1805.

As the advantage of local Floras becomes every day more apparent, it is to be hoped that their multiplication will keep pace with the progress of botany. The present attempt, though little more than a catalogue of names and habitations, is deserving of notice, and will be found of very material service to those who follow the footsteps of the editors; who subscribe themselves N J. Winch, F.L.S, John Thornhill, and Richard Waugh. Their enumeration is the result of various excursions performed in the course of the last ten years, and was originally intended only for their private use. Besides their own researches, which were often attended with great fatigue, though never with subsequent satiety or disgust, they have availed themselves of the friendly communications of the Rev. J Harriman of Gainford, Mr. E. Robson, of Darlington, Mr. William Backhouse, jun. of the same place, Dawson Turner, Esq. of Yarmouth, who examined almost every species of moss inserted in their catalogue, and Dr. Swartz, of Stockholm, 'who, by his valuable presents of Swedish mosses, has enabled them to quote his *Muscologia Suecica* with confidence.' Several cryptogamies are likewise cited on the authority of the late Mr. William Weighell, of Sunderland, whose herbal came into their possession.

This

This first part, which is addressed in rather stiff and aukward language to the president and members of the Literary and Philosophical Society of Newcastle, exhibits a list of 1099 species. The second volume, in which it is intended to arrange the history according to the method adopted by Dr. Acharius, is in forwardness for publication.

Among the more rare plants included in the present list, we remark *Phleum crinitum*, *Bromus diandrus*, *Arundo colorata*, *Radiola millegrana*, *Chironia pulchella*, *Silene conica*, *Fumaria lutea*, *Cypripedium calceolus*, *Salix venu osa*, and *Gymnostomum Heimii*; not to mention a new species of *Chironia*, *Rosa*, *Hieracium*, and *Gymnostomum*. With respect to these non-descripts, although the editors have declined affixing to them any specific designation, we wish that they had characterized them in such a manner that the botanical student could have compared them with their congeners, and assigned to them their proper station in the system.—The compilers have in vain searched for *Lysimachia vulgaris*, *Cicuta virosa*, *Pyrola secunda*, *Ornithogalum luteum*, *Orobanche ramosa*, and *O. minor*, in the situations indicated by Wallis, in his History of Northumberland. *Lonicera Xylosteum*, *Cistus manifolius*, and *Sonchus cæruleus* have likewise eluded their search. *Crithmum maritimum*, they have reason to suspect, has never occurred near Alnmouth. Yet they profess their obligations to Wallis's notices, which have been too much slighted by some recent botanists.

Similar memorandums of the indigenous plants of Cumberland would form a desirable supplement to the present publication. Muir.

POETRY.

Art. 18. *Gayton Wake*, or Mary Dod; and her List of Merits. A Poem in four Parts. By Richard Llwyd, Author of Beaumaris Bay *. 12mo. 3s. Williams.

The muse on this occasion displays her lively and sportive powers in celebrating the adventures of Mary Dod, a female of extraordinary magnitude; and the imagination of the reader is led by the art of the poet into that festive train of thought, which might dispose him to enjoy the frolics of a Country Wake. Gayton is a village near Park Gate, in Cheshire. Man.

Art. 19. *Poems. Tales, Odes, Sonnets, Translations from the British*, &c. &c. By Richard Llwyd. 12mo. 6s. Boards. Williams.

Many parts of these poems will interest and amuse the reader; who will be pleased with the chearfulness of the author, with his powers of imagery, and with his talents for the descriptive and narrative in poetry. We select a specimen from the history of Kate of Cymmau:

'Where rolls Cegidog,† highly born,
With hasty steps to meet

The

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* See Rev. Vol. xxxii. N.S. p. 318.

'† A mountain stream, which, passing Cymmau and uniting with the Alyn (lesser river) and the Terrig (rippler) falls into the Dee, near Eatan, in Cheshire:—Thus Drayton:—

'Then

The Alyn, Terrig, sister waves,
It washes Cymmau's feet.*

'Astonish'd by a world of charms,
By every rural grace;
The Naiads twist and curl its course,
As loth to leave the place.

'The stubborn oak, the forest's pride,
In love with scenes like this,
Leans from the rocky cliff, and bends,
The playful stream to kiss.

'The alders wave, the willows twine,
The ash ambitious towers,
While laughing Satyrs bend the boughs,
And braid them into bowers.

'And he, who, with poetic eye,
Explores this blest retreat,
Will, unforeseen, a Cottage find,
And in it—good old KATE.

'The worthy dame, of snowy locks,
The kindest welcome gives;
Her smiles declare the peace within,
And neatness with her lives.

'Fortune, a lass of boundless whim,
Whose views no man can tell,
Decreed, that in this little cot
Th' industrious Kate should dwell.

'Hall, parlour, kitchen, tea-room, one,
And yet minutely nice;
A clock she boasts, a cupboard too,
That once conceal'd the spice.

'In rank and file, her crockery's plac'd,
Her Buckley ware†, her Delf;
So well the tidy soul has learnt
The tactics of the shelf.

'Her chair, the wheel that's seldom still,
Half fill her little floor;
And *Toby*, trotting to and fro,
Yet watching still the door.

'Then Alen makes approach (to Dee most inly deere)
Taking Cegidog in; who, earnest to be there,
For haste, twice under earth her crystall head doth runne.'

'* Pronounced Cumma, the plural of Cwm, a Dingle, the name of a house and township in the parish and manor of Hope or Estyn, Flintshire.'

'† Buckley, in the parish of Hawarden, where coarse earthenware is made.'

'The hearth so neat, her pitchers clean,
The Fairies come with glee
To hold their gay nocturnal feasts,
And leave the morning fee*.

'Her looks a temp'rate lesson give,
That's seldom learnt by Wealth,
For cheerful Kate, at eighty-two,
Can still shake hands with Health.

'Ye fair, who swell the crowd of Courts,
And Windsor's terrace grace;
Who, haunted by *ennui*, pursue
An endless change of place:

'Would Fate in some good humour'd hour,
Design your minds a treat,
'Twould be to bring you quickly down
To drink your tea with Kate.'

A tale of this kind captivates, because, like a good painting, it represents faithfully, and in a feeling manner, not only the outlines but the more minute beauties of the prospect. The movement of the dog in the cottage is an instance of this art of the Poet.

In other poems of the collection, we meet with beauty of the figurative kind, and personifications happily applied; and if every part be not equally successful, we discover enough to induce our commendation of a humble Cambrian bard, who displays talents and genius. Mans.

Art. 20. *Miscellaneous Poetry:* by Edward Coxe, Esq. of Hampstead-heath, Middlesex. Crown 8vo. pp. 385. 8s. Boards. White, &c. 1805.

This volume consists of short original effusions, translations, and imitations, of various degrees of merit, but few of which rise above the praise of mediocrity, if mediocrity in poetry can be worthy of praise. The author indeed modestly renounces all pretensions to the higher and more sublime flights of the muse; and the local interest of many of his subjects and allusions will be unfortunately lost on the public. With greater nicety of selection, and more sedulous elaboration of his numbers, he might have attained to a better station on Parnassus; since, from a few successful attempts, it is fair to conjecture that more might have been achieved.

'* In Wales, as in other pastoral districts, the fairy tales are not yet erased from the traditional tablet; and age seldom neglects to inform youth, that if, on retiring to rest, the hearth is made clean, the floor swept, and the pails left full of water, the Fairies will come at midnight, continue their revels till day-break, sing the well known strain of *Torriaddy Dydd*, or the *Dawn*, leave a piece of money upon the hob, and disappear: the suggestions of intellect, and the precautions of prudence, are easily discernable under this fiction; a safety from fire, in the neatness of the hearth; a provision for its extinction in replenished pails; and a motive to perseverance, in the promised boon.'

In the following stanzas, we recognize something like the amatory spirit and classical ease of Anacreon and Horace:

'Let us, my Delia, while we live,
Crown'd with each bliss that Love can give,
The rumours of the grave despise,
For life, alas! too swiftly flies;
And all its cares can only tend
To make us sooner reach its end.

'Dear to each other, let's be gay,
And sport the frolic hours away:
Old age at last will fade thy charms,
Which now inspire to love's alarms;
And from thy cheek the roses fright,
That now attract my ravish'd sight!

'I too, tho' now in youthful prime,
Must feel th' effects of envious time;
Grey hairs and wrinkles then will meet,
My trembling pulse must fainter beat,
In broken sounds my voice will die,
And dimness close my languid eye.

'Ah! then, adieu! the social walk,
The soft embrace, the tender talk!
My tuneful pipe will then be mute,
Nor sport, nor dance, nor song can suit,
When love's bright warmth and genial fire,
Repress'd by frozen age expire!

'Then let us seize the present hour,
While beauty reigns in all its power;
And I, still warm in ardent youth,
Breathe in this kiss my plighted truth,
Let us the precious time improve,
In all the various sweets of love.

'Then as my arms I fondly twine
Around that heavenly neck of thine,
I'll clasp thee to my faithful breast,
With Hymen's chaste endearments blest,
Bid every other wish adieu,
And only live for love and you!'

The wit of the Epigrams is mostly confined to a play on words. One of the neatest of this description is on the watch-tax:

'Of the tax upon watches poor RICHARD is sick;
Lest his turn should come next, for *he* goes upon Tick!'

The sonnets are mostly translations from Petrarch, and the Imitations are chiefly from Horace and Martial. The 38th Ode of Horace's first book is thus rendered:

'Frizz me no more—I cannot bear
Mountains of powder on my hair,

And oceans of pomatum ;
Let city prigs, or courtly beaus,
Wear the scarce bag, or *scarcer rose*,*
I will not, for I hate 'em.
Thus to be feather'd as an owl,
Or larded like a gallic fowl,
For Englishmen is horrid !
Dress me no longer like a fop,
But bring my scratch, whose Tyburn top
Lies snug upon my forehead.'

Of these imitations, the merit principally consists in the adaptation of antient allusions to modern manners.

We have only to add that, if these fugitive pieces are not conspicuous for eminent beauties, they are not only free from glaring defects, but manifest at once elegance and chearfulness of mind. **Muir.**

Art. 21. *The Wanderer of Switzerland*, and other Poems, by James Montgomery. 12mo. pp. 175. 4s. Boards. Vernor and Hood, &c. 1806.

The general merit of these poems is far from inconsiderable ; most of them being characterized by a graceful ease of versification, and by the simple expression of genuine feeling. Although we cannot assure the author that, in the first and longest piece in the collection, he has united 'the majesty of the epic, with the fire, rapidity, and compression of the ode,' he nevertheless relates an affecting tale in artless lays, and in the interesting form of a natural dialogue.

A wanderer from Switzerland, with his wife, his daughter, and grandchildren, having resolved to migrate to America on the subjugation of their country by the French in 1798, are hospitably received by a shepherd on the frontiers of Switzerland :

Shepherd. " Wanderer ! whither dost thou roam ?
Weary wanderer, old and grey,
Wherefore hast thou left thine home,
In the sunset of thy day ?"

Wanderer. " In the sunset of my day,
Stranger ! I have lost my home :
Weary, wandering, old and grey,
Therefore, therefore do I roam.
Here mine arms a wife enfold,
Fainting in their weak embrace ;
There my daughter's charms, behold,
Withering in that widow'd face.
These her infants,—O their Sire,
Worthy of the race of TELL,
In the battle's fiercest fire,
—In his country's battle—fell !"

In the second and third parts, the wanderer recites the sorrows and sufferings of his country, and particularly the battle and massacre of

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* An appendage to the wig.

Underwalden.

Underwalden. In the fourth, he describes the circumstances attending the death of his son in-law; in the fifth, his own adventures after the battle; and, in the sixth, he intimates his intention of following the example of many of his countrymen, who had taken refuge in some remote province of America.

The conduct of the dauntless but devoted patriots, who resisted to the last the unprincipled progress of their invaders, is rehearsed with much spirit and poetical effect.

The mention of Albert's death introduces a simile which is very pretty, but, perhaps, not quite natural on the part of his still weeping relative:

'So when Night, with rising shade,
Climbs the Alps from steep to steep;
Till in hoary gloom array'd
All the giant-mountains sleep;—
'High in heaven their monarch* stands
Bright and beauteous from afar,
Shining into distant lands,
Like a new created star.'

It is probable that Mr. Montgomery never saw the mountain song composed in the patois of the *Pays de Vaud*, and which begins with

"*Ye pliao, ye pliao, ma mia,*" &c.

and yet, if we make allowance for the difference of the subject, (a distressed family, in the one case, and a lovely shepherdess overtaken by a storm, in the other,) we shall find some passages which are nearly parallel. The mountain-lay to which we allude is short, and rather too condensed. In our hurried version, which we subjoin, we omit the first and last, and half of the second stanza, as inapplicable to the illustration of our remark:

* * *

In yon cot we happy live;
Susan and my mother kind
Strive who first shall welcome give,
Who shall first the door unbind.
Hail, dear mother, sister hail!
On you fall the bliss of eve!
Here's a stranger from the gale;
For this night a guest receive.
Heap the hearth with faggots old,
Light for her the fuel rare.
Ah! she shivers with the cold.—
Sure her sheep shall be my care.
Mother, we must guard her stock,
All her stock of browzing sheep,

'* MONT BLANC,—which is so much higher than the surrounding Alps, that it catches and retains the beams of the sun *twenty minutes* earlier and later than they,—and crowned with eternal ice, may be seen from an immense distance, purpling with his eastern light or crimsoned with his setting glory, while mist and obscurity rest on the mountains below.'

For the lambkin of her flock
Cull the tender grassy heap—
Now, dear mother, all is well.
Sit we once more round the fire.—
See how charming is my belle,
In her simple, neat attire!
Now comes supper—here's thy chair,
To sit beside thee what delight!—
On the platter of my fair
I'll cast the lamp's refulgent light.—
Come, taste our cream—I pray thee, do—
Nay, my dearest, be not shy—
Why refuse?—I tell thee true,
This is too much modesty.

* * *

Let us now listen to part of the shepherd's welcome to the Wanderer;

"Here, though lowly be my lot,
Enter freely, freely share
All the comforts of my cot,
Humble shelter, homely fare.

"Spouse! I bring a suffering guest,
With his family of grief;
Bid the weary pilgrims rest,
Yield, O yield them sweet relief.

"Haste, recruit the failing fire,
High the winter faggots raise:
See the crackling flames aspire;
O how cheerfully they blaze!

"Mourners! now forget your cares,
And till supper board be crown'd,
Closely draw your fire side chairs;
For the dear domestic round." &c.

As several of the smaller effusions, with which we are here presented, are republished from the Poetical Register, we forbear to particularize them, and shall only remark that the Lyre, the Pillow, Hannah, and the Field-flower, are intitled to superior commendation.

We hope that Mr. Montgomery, who is a printer at Sheffield, will meet sufficient encouragement from the public to furnish more abundant employment for his press.

Muir.

POLITICS.

Art. 22. *A concise Account of the Commerce and Navigation of the Black Sea*: from recent and authentic Information. 8vo. 2s. 6d. Cadell and Davies.

The attention paid by Russia to the navigation of the Black Sea imparts considerable interest to any communications which respect that portion of the globe. Readers of Eton, Jackson, and Oddy, (see the first article

article in this Review,) will not meet in this pamphlet with many particulars that are novel: but a few of those which have the fairest claims to this distinction we shall endeavour to abstract.

Seven or eight hundred mercantile vessels, we are told, now frequent the ports of the Euxine; and our readers are aware that communications are forming between it and all the grand points of the Russian empire.

The author recommends the 'sending to the Black sea a cutter or brig with an astronomer, to make a complete survey of the whole coast, with the ports, &c. for the use of merchant ships. The expence would be trifling, while the object is of the greatest importance.' There is little doubt, he adds, 'but that this measure will be adopted by the present Lords Commissioners.' The choice of Odessa as the principal port of the Black Sea is here represented as most unfortunate; and we are informed that it has 'neither wood nor water, that the road is not the most secure, and that there is reason to fear that it is liable to be filled with sand and mud.' Other inconveniences are also stated. 'It is matter of wonder,' the writer continues, 'that while the Russians had Oczakow in their possession, they should have given the preference to Odessa, as the one had every thing required without the expence of a penny; while the other will never have what is requisite should the whole revenues of the empire be expended upon it.'

We are told that 'great losses have occurred to merchants who have sent ships to load corn at Odessa, by not having first sent orders to have the cargo prepared. No corn or other merchandise is to be purchased in the ports of Russia; (even little at St. Petersburgh or Riga;) it must be procured in the interior, and brought to the ports, for which some months are necessary.' At Odessa, this inconvenience has been of late remedied, owing to the exertions of the Duke of Richelieu who is governor of the place.

A short time previously to the revolution, the French Government had agents at Cherson, who were ordered to supply Toulon with masts and naval stores.

'The return of the French commerce is anxiously looked for,' we are informed, 'by all the people in the vicinity of the Black Sea, and particularly by the great proprietors: and our war is regarded as the cause of their being deprived of this commerce.' 'It is evident that France is the country best situated to carry on the Black Sea trade.' The writer expresses apprehensions that this commercial connection, whenever it takes place with our rival, may endanger our political relations with the court of St. Petersburg. From the ports on this sea, France may supply itself with naval stores of all kinds much cheaper than we can from the Baltic. The masts, which we receive from Riga, are nearly two years on their road to that port; while masts cut in the same forests may arrive in France by way of the Black Sea in six months.—It appears from the statements here made, that time must bring on important commercial relations between France and Russia. 'We need,' he says, 'only inspect the map of Russia to see where the products come from, and how the rivers run, to perceive the advantages France must have

from a commerce with the Black Sea ports.' He very properly invites the attention of public men to these circumstances, and strongly recommends it to them to favour a connection with Russia on this side of its empire. Mr. Oddy, however, discourages such an attempt, on account of the tediousness of the voyage, which he asserts would be as long as a passage to Madras. Be this matter as it may, the public are obliged to this well informed writer, for the facts which he has submitted to consideration, and for the reflections with which he has accompanied them.

Jo.

MEDICAL *and* CHEMICAL, *&c.*

Art. 23. *Essay on Quackery*, and the dreadful Consequences arising from taking advertised Medicines. With an Account of a recent Death occasioned by a Quack Medicine: interspersed with Anecdotes of the most celebrated Quacks of the present Day; &c &c. 8vo. 4s. Boards. Printed at Kingston-on-Hull; sold by Cundee, &c. London.

We perfectly agree with this author in thinking that the extent to which quacks carry their puffing arts, and the facility with which they impose on a large body of the people, is a national disgrace, which calls loudly for redress: but we fear that the reform will not be produced by the work before us. The author confesses that he has not enjoyed the advantages of education, and that a laborious employment does not allow him sufficient leisure to cultivate literature; facts of which his publication exhibits but too many exemplifications. On a subject like the present, something more is necessary than good intentions: declamation and raillery should be used with a cautious hand; and the best antidote for the evil would probably be an accurate statement of the rise and progress of the most noted of the empirical tribe, a developement of the tricks by which they forced themselves on the public notice, and a disclosure of the artifices which they employ to dispose of their medicines.

Bos.

Art 24. *Remarks on Sea Water;* with Observations on its Application and Effects, internally and externally, as conducive to Health. By Charles Taylor, M. D. Secretary to the Society for the Encouragement of Arts, Manufactures, and Commerce, &c. &c. 8vo. 2s. 6d. Boards. R. Phillips. 1805.

Though the rage for sea bathing, which extends to all classes of people, may be, on the whole, productive of salutary effects, yet, considering how indiscriminately it is practised by persons of all ages and constitutions, injurious consequences must occasionally result from it. A work which should point out, in an intelligible and popular style, the manner in which this operation affects the constitution, and should briefly notice both those states of the system which are favourable for its employment, and those in which it would probably prove detrimental, would therefore be a valuable present to the public. Such is the object of the volume before us, and, in some degree, it has been attained: but we confess that, in many particulars, the execution of it is very far from being satisfactory to us.—It is introduced by a dedicatory letter, which is somewhat repulsive to our feelings, addressed

to

to a friend of the author, who is a surgeon at Hastings; and, after having enlarged on the superior advantages of this town as a bathing place, Dr. Taylor concludes with some remarks on the professional skill of this friend, and insinuates that medical advice is generally requisite for those who frequent watering places. He then proceeds to offer some general observations on bathing, next on the internal use of sea water, and afterward on the effect of baths at different temperatures. On all these points we meet with many suggestions which are useful, and which might be applied with advantage to regulate the conduct of those who visit the sea coast: but, unfortunately, this information is mixed with a large alloy of speculation and hypothesis, some of which we apprehend to be unfounded, and some absolutely false. The author appears to enter completely into the exploded doctrines of the humoral pathology; he imagines that sea water sweetens the blood, and 'edulcorates' the fluids; and as if he had never heard any doubts expressed respecting cutaneous absorption, he supposes that this effect is produced on the blood by the water which enters through the pores of the skin. He falls into the vulgar error of attributing to sea water more virtues than a prudent man would choose to ascribe to any remedy, however valuable:—it is tonic, stimulant, diuretic, astringent, aperient, dissolvent, antispasmodic, and, in short, it possesses all the qualities of the whole materia medica. From such exaggerated encomiums we turn away in disgust, and are perhaps scarcely inclined to allow to the work its real share of merit. **Bos.**

Art. 25. *Outlines of the Origin and Progress of Galvanism;* with its Application to Medicine. By William Meade, M. D. 8vo. Pamphlet, printed in Dublin.

We cannot say much in commendation of this tract. The account of the origin and progress of Galvanism is superficial, and not always accurate; and the remarks respecting its application to medicine are conveyed in too vague and too general a style, to admit of their being really serviceable to the practitioner. In perusing the work, we were struck with that incorrectness which so frequently characterizes the productions of the Hibernian press: Mr. Cruickshank, of Woolwich, is called Crookshanks; Mr. Nicholson, the chemist, Nicolson; and Dr. Haygarth, of Bath, Hagarth.—An account is inserted of an improvement in the construction of the Voltaic pile, suggested by a Dublin artist, which seems to be ingenious, and would probably have been found useful, had not this apparatus been almost superseded by the Trough. **Do**

Art. 26. *Cases of Two extraordinary Polypi removed from the Nose,* the one by Excision with a new Instrument, the other by improved Forceps; with an Appendix, describing an improved Instrument for the Fistula in Ano, with Observations on that Disease. Illustrated with a Copper-Plate. By Thomas Whately, Member of the Royal College of Surgeons in London. 8vo. 2s. Johnson, &c.

These two cases are of considerable value, as affording useful information to those who may in future be called to operate on similar complaints. The first case had been three years in forming, and had extended from the nostril into the throat, so far as to block up en-

tirely the passage into the nose behind the palate, and thus considerably to impede the respiration, and affect the voice. The author first tried to detach the tumor by the forceps; and, on account of its size, he constructed a pair larger than those which are commonly employed: but he found it impossible to remove the tumor without using too great a degree of violence. He was not more fortunate in his attempts to detach it by a ligature; so that at length he resolved to employ excision, and, for this purpose, used a probe-pointed bistoury, inclosed in a moveable sheath, which could be withdrawn after it had been introduced into the nostril. By means of this instrument, he easily cut through the tumor at its base, without causing any extraordinary degree of pain, and without any dangerous hæmorrhage being produced. No unpleasant consequences followed from the operation, and a considerable period has elapsed without any tendency to a return having been manifested.—In the second case, which was for the most part attended with the same symptoms, the polypus was removed by a pair of forceps, which were adapted to the particular occasion. Here, as in the former instance, the hæmorrhage which ensued was so small in quantity as to excite little attention.

A curious circumstance attending both these cases was an extraordinary degree of drowsiness which affected the patients; so that they were liable to fall asleep even while engaged in their usual occupations. This happened to one of the patients, who was a hair-dresser, 'whilst dressing a gentleman's hair, and he dropped the hot curling irons upon the head of the person he was dressing. He has been known likewise to fall asleep whilst setting a razor, and has frequently let the razor drop on the floor, especially when he has attempted to continue this employment longer than the setting a second razor at one time.' Had this drowsiness happened in one instance only, we should have supposed it to have been an accidental coincidence: but, since it occurred in both these cases, and was removed by the operation, it would seem that it depended on the tumor, although we confess ourselves unable to explain the mode in which it could act.

The treatise concludes with some remarks on the operation for the *fistula in ano*, and a proposal for an alteration in the instrument usually employed. Mr. Whately's improvement principally consists in arming the bistoury with a sheath while it is introduced into the sinus, which is withdrawn when the incision is to be made. Bos.

MISCELLANEOUS.

Art. 27. *Essays and Sermons on Select Subjects.* To which is annexed, a Discourse on the Nature of the Christian Religion. By John Buddo, A. M. 8vo. 5s. Bds. Creech, Edinburgh; Longman and Co. London.

What was the design of Mr. Buddo in publishing this volume, we cannot pretend to judge: but certainly, if he had any particular views to literary fame from this specimen of his pretensions, we apprehend that he will have occasion to encounter disappointment. We meet, indeed, with occasional passages and remarks in this volume, which deserve attention and commendation: but some of these we recollect

recollect to have read *verbatim* in Jortin's Sermons and other writers, and we think that they shine with more lustre in their original situation, than in the loose soil to which they are here transplanted:—we call it a *loose soil*, because it does not adhere together, and does not discover any *lucidus ordo* in the arrangement of the materials. Mr. Buddo does not appear to us to have any native strength of thought, nor an adequate conception of the subject on which he writes. We shall not, however, canvass more minutely the merits of a bird in borrowed plumage.

Man?

Art. 28. *Progress of Education and Manners*, by John Buddo, A.M. 12mo. Printed at St. Andrew's.

In this treatise, Mr. Buddo has collected, and, we think, more judiciously and coherently than in the former publication, some good sentiments and remarks on the Education of the Antients and the Moderns.

Do

Art. 29. *Observations on the Cultivation of Waste Lands.* Addressed to the Gentlemen and Farmers of Glamorganshire. By James Capper, formerly Colonel and Comptroller-General of Army and Fortification Accounts of the Coast of Coromandel. 8vo. 2s. Egerton.

Colonel Capper here details the results of his experience in bringing 150 acres, which he purchased and enclosed on Cardiff Great Heath, from a state of waste into cultivation. Paring and burning the surface, with the addition of a moderate quantity of lime, is stated to be the cheapest and best method of preparing for a crop such soil as had been long neglected and full of ants. Objections to gentlemen-farming are obviated; the necessity of capital in order to conduct agricultural improvements with spirit and effect is urged; and plans for the cultivation of wastes on a large scale are detailed. Government is advised to lend its aid to this measure.—In the Introduction, Col. C. recommends it to the gentlemen and farmers of the County of Glamorgan, to establish a school of Industry for the children of the labouring Poor.

This pamphlet is not unworthy of the attention of those to whom it is addressed.

Mo-y.

Art. 30. *An Outline of Chronology*, connecting Sacred with Profane History; (designed for Young Persons;) to which is added a Poetical Chronology of English History, with Explanatory Notes. 8vo. pp. 67. 2s. Johnson. 1805.

It is impossible not to regard with respect the motives to which this little volume owes its origin; and the attention of children cannot be directed to facts without benefit. If, however, these pages had been submitted to the inspection of a learned acquaintance, a few obvious errors, which at present sully them, would have been avoided. Under the head of triumvirs, the names of two only of each triumvirate are inserted.—If this attempt has not proved eminently successful, it shews that the fair writer possesses a sensible and observing mind. We say fair writer, because we learn from private information that we owe this production to a respectable lady.

Jo.

Art.

Art. 31. *The Mirror of Iniquity*, contained in a Letter to the Magistrates of England. By Robert Holloway. 8vo. pp. 73. 2s. Holloway, No. 9, Fleet Market.

Nothing can be more heinous than the conduct of common informers, the particulars of which are here related; and which consist of outrages, violence, extortion, and oppression, exercised under the pretended cover of legal authority. The subject certainly deserves the attention of those judicial characters to whom this letter is addressed. Jo.

Art. 32. *Select Passages from various Authors*, designed to form the Minds and Manners of Young Persons; and at the same Time to afford an agreeable Miscellany for those of riper Years. By the Author of the Short History of Insects, &c. Second Edition. 12mo. pp. 358. 5s. Boards. Ebers. 1805.

A distinguishing feature of this compilation is that it has a more religious cast than preceding collections of the same kind; and the pieces are for the most part well selected, and taken from approved works. The contributions levied by the late Dr. Enfield on all the choice authors, up to the date of his labours in this walk, form a mass of great merit: but many admirable writers have appeared since that time, whose works furnish materials by which his collections might be very much enlarged. His design may be pursued with advantage, but we by no means wish to see it superseded. Jo.

Art. 33. *The Secret History of the Court and Cabinet of St. Cloud:* in a Series of Letters from a Gentlemen at Paris to a Nobleman in London, written during the Months of August, September, and October 1805. 3 Vols. 12mo. 18s. Boards. Murray. 1806.

We suspect that this Secret History, though it professes to have a different origin, proceeds from the same pen which has indited the Revolutionary Plutarch *, and the Life of Talleyrand; and though it is somewhat less scurrilous than these productions, it is not, if our penetration may be trusted, in any degree more authentic. It consists in a great measure of anecdotes of the members of the new Imperial Family, and of public characters who have been in any way connected with the French Revolution: but a great part of the relations is formed of the idlest gossip to which the ear of credulity was ever opened. Those who had faith in the *Revolutionary Plutarch*, and who were gratified by its perusal, will prize this 'Secret History:' but, for our own part, we hesitate not to declare that we regard the favourable reception which these compositions have experienced, as a reflection on the discernment and taste of the public. France deals much in this sort of trash: but we are sorry to see its example so closely copied in our own country.

A tale is here told respecting our gallant countryman, Captain Wright, which harrows up the soul beyond even the relations of the most horrid proceedings of the infernal Inquisition itself, in the days of its greatest sway. If the account be true, we forbear comment, as wanting powers to supply it in any degree equal to the occasion: if

* See our Review for May, p. 93.

it

it be a fabrication, we should feel almost equal y at a loss for language to express our detestation for its author. Jo.

Art. 34. *Selections from the Works of Taylor, Hooker, Hall, and Lord Bacon*, with an Analysis of the Advancement of Learning, by Basil Montagu, Esq. A.M. 12mo. pp. 368. 7s. Boards. Mawman. 1805.

If it should be said of these selections that little connection subsists between them, and that they are mere detached extracts which refer to a variety of subjects, it may be observed on the other hand that they may induce readers to have recourse to the originals from which they are borrowed, and that thus the compiler will render no slight service to sound knowlege and to individuals. On the same principle, the *Analysis of the Advancement of Learning* is perhaps intitled to escape censure: but we were rather surprized at this time of day, to see this analysis performed by an A. M. of a scientific University without any comments or observations; especially, when it is considered that they might have been obtained at the easy rate of consulting the *Discours Préliminaire à l' Encyclopedie.* We know not how to account for the omission of any reference to that masterly production. —It is but justice to Mr. Montagu to add, that his partiality for the fine passages of these antient worthies is creditable both to his judgment and his taste. Jo.

Art. 35. *A Defence of the Principle of Monopoly; of Corn-Factors, or Middlemen; and Arguments to prove that War does not produce a Scarcity of the Necessaries of Life* 8vo. 1s. Symonds.

It is justly observed by Dr. Adam Smith that, in seasons of scarcity, monopoly operates beneficially for the public, by raising the price of the scarce article, and thus forcing persons to put themselves on short allowance: but it does not follow that a measure, which, under particular circumstances, is found to have a good tendency, is to be converted into a general and universal principle. When plenty is restored, the motive for the short allowance is removed; and no man in his senses would argue that, because monopolizers, by raising the price of grain, necessarily effect a public good when the crop is short, they ought to be encouraged in their endeavours *at all times* to keep the price of grain as high as possible. The effect of such reasoning is to make a particular case the ground of a general rule; and we cannot therefore subscribe to the leading doctrine of this pamphlet.—As to large farms, they certainly have their use: but the best informed men on the subject of political economy are of opinion that it is necessary to have farms of all sizes.—To the assertion that 'war does not generally produce scarcity,' it will be sufficient to reply that, in as much as war takes from the mass of productive labour, and places multitudes in situations in which they must be fed by the public, so far, to say nothing of the ravages and losses of war, it must operate to a certain extent in promoting scarcity. If, however, the number taken from cultivating the soil, for the purposes of necessary defence, bears a small proportion to those who are left on it, the effect will be but little felt.—We do not approve the temper in which this pamphlet is written; nor the conduct of the author who, not contented with maintaining

taining the above stated position, would induce the "Swinish Multitude" to believe that 'war is the parent of abundance and plenty,' omitting to subjoin the words—of Taxation. Mo.y

Art. 36. *The Triflers*; consisting of trifling Essays, trifling Anecdotes, and a few poetical Trifles. By an Adept in the Art of Trifling. To which is added the Rout, a new Edition, with a few Additions, corrected by the Author. Also the Farmer's Son. By the late Rev. R. Graves, Author of the Spiritual Quixote, &c. &c. &c. 12mo. pp. 185. 4s. Symonds, &c. 1805.

These miscellaneous pieces, which are somewhat formally arranged under four divisions, intitled, 'The Triflers,' 'Essays,' 'Anecdotes,' and 'Poetical,' amount to thirty-six. In their present form, they were delivered for publication, a few weeks previously to the venerable author's death;—an event which, combined with the refractory conduct of the journeymen printers, has occasioned their tardy introduction to the light. The business of life, not excepting that most *important* part of it denominated *trifling*, might doubtless have proceeded without them: but they are pleasing proofs of enviable good humour at the advanced age of fourscore and ten; and if they present little that is original, or that is penned with peculiar felicity of conception, they will seldom tire by their length, and never offend by outraging the principles of taste or virtue. To some of our readers, we believe that we may even venture to recommend a few of the local anecdotes, on account of their novelty.

Some short notices occur relative to the early life and conduct of Sir William Blackstone, with whom Mr. Graves was a fellow collegian, which are interesting from their relation to that celebrated character.

The anecdotes of Mr. Allen, the friend of Pope, will likewise be perused with considerable satisfaction.

The *Rout* and the *Farmer's Son* are not devoid of merit: but Mr. Graves's poetry is rather easy than polished; and his smaller effusions, which now appear for the first time, might have been confined to his private friends, without injury to his literary reputation.

The profound student will readily admit that this little performance by no means belies its title: but, for this very reason, it may prove no unacceptable treat to the sick or the idle; and especially to those who are not oppressed with occupation at Bath, with which place the author was long acquainted, and with whose mayors he was in the habit of dining once in a year, for half a century. Muir.

Art. 37. *A Treatise on constructing and copying all Kinds of Geographical Maps.* Part first elucidates the Globular, Stereographic, and Mercator's Projections of the World. Part second, on the Projection of Maps of particular Parts of the World. Part third, A Description of Instruments by the Help of which the Meridians and Parallels of Latitude may be drawn with great Facility. Part fourth, Directions for inserting Places, drawing Rivers, Sea Coasts, and other Boundaries, and for copying, colouring, mounting, and other minutiæ of Mapping. Illustrated with Copper-plates and Wood Cuts. By Thomas Dix, Master of North Walsham Academy,

demy, Author of a *Treatise on Land Surveying.* 8vo. 3s. 6d. Scatchard and Co.

A very long title-page and a short book: the former of which, however, saves us the trouble of describing the contents of the latter. The plates are very neatly executed, but incommodiously folded up and placed at the end of the work. R.W.

Art. 38. *The remarkable Case of Potter Jackson*, formerly Steward of the Echo Sloop of War, giving an Account of the most cruel Treatment he received from Capt. Livesley, Commander of the Lord Stanly Slave-ship, and his chief Mate; by assaulting, imprisoning, putting in Irous, and cruelly flogging him: which caused blood to burst from his Eyes and Breast, and large Pieces of Flesh to come from his Back. Written by Himself. With the Trial, before the Right Hon. Lord Ellenborough, in the Court of King's Bench, Guildhall, London, July 10, 1806, when the Jury returned a Verdict 500l. Damages. 8vo. 1s. Butters.

This is indeed a 'remarkable case' of cruelty, and we hope that it will ever continue so, nay even that it may be *unique.* Lord Ellenborough justly observed that it was unparalleled and unprovoked, and that he should have suspected exaggeration if it had not been so clearly proved not only affirmatively, but by the absence of all negative testimony on the Part of the Defendant. The evidence of the second mate, who was obliged by his commander to be a party concerned, proved the facts, and would have no doubt included any extenuation, if the case had admitted it.

Poor Jackson is now in a deplorable state both of body and pocket; and as he rightly observes that the Defendant's absence from England may cause a considerable time to elapse before he pays the damages awarded, if ever he does, present relief from the benevolent will be most charitably bestowed on him. He may be seen daily at his publisher's, No. 22, Fetter Lane. G. 2.

Art. 39. *The Circle of the Sciences consecrated by the Cross*, a brief Attempt to exhibit the first Elements of Science, and to shew how every branch of useful Knowledge may be made subservient to the best Purposes. 12mo. 4s. Williams and Smith.

Multum in parvo: an undertaking calculated to fill the memory with words, rather than to enrich the mind with ideas. By such works as these, abounding in general propositions, stated in somewhat of technical language, it is ridiculous to attempt the real instruction of the young student. R.W.

SINGLE SERMONS.

Art. 40. *Virtuous Remembrance.* A Sermon sacred to the Memory of the honoured Dead; and particularly of the late James Currie M. D. F.R.S. Preached at the Chapel in Paradise-street, Liverpool, Nov. 17, 1805. By the Rev. G. Walker, F.R.S. and president of the Literary and Philosophical Society of Manchester. 8vo. 1s. 6d. Johnson.

The

The language and sentiments of this discourse raise it far above the level of the generality of those compositions among which its title classes it. The death of the truly valuable Dr. Currie could not have been more forcibly and pathetically improved; and though Mr. Walker does not particularly expatiate on his high scientific attainments and moral worth, he seems inspired by the recollection of the eminent qualities which distinguished his friend; and in doing justice 'to the memory of the honoured Dead,' he has deduced such lessons as must teach resignation, and rouse to active virtue every ingenuous mind. In recommending this sermon to an attentive perusal, we perform a duty to our readers; and if they follow our advice, we shall be sure of their thanks.

The typography of this pamphlet reflects great credit on the Liverpool press.

Mo. y.

Art. 41. Preached at Sutton, near York, Feb. 26, 1806, on the occasional Fast. By E. Sandwith. 8vo. 6d. Scatchard and Co.

We see nothing in this discourse that intitles it to any particular notice. The text is Jonah, iii. 9, 10.

Do.

CORRESPONDENCE.

We shall always be glad to hear from so intelligent and respectable a correspondent as *Amicus*, and should ever be happy in fulfilling his wishes. In the present instance, he may expect the speedy gratification of his request.

R.S. will find an account of the work, which is the object of his inquiry, in the present number.

Our fair friend *Daphne* is rather unreasonable in endeavouring so highly to tax the gallantry of such grey beards as Reviewers: but she may depend on full effect being allowed to the recollection of "our dancing days," as far as Justice will permit.

X. Y. thinks that he has discovered an error in argument, in our last number: but his attempt to prove the charge only manifests his own incompetence to understand the subject.

☞ The *Appendix* to the current Vol. of the M. R. will be published on the 1st of October with the number for September, and will contain accounts of various important *Foreign* works, with the Title, Index, and Table of Contents for the Volume.

Errors, p. 338, 344, 349, 352, 369, 393, 416, 432,

THE

APPENDIX

TO THE

FIFTIETH VOLUME

OF THE

MONTHLY REVIEW

ENLARGED.

FOREIGN LITERATURE.

ART. I. *De la Ligue Hanséatique*, &c.; *i. e.* Of the Hanseatic League, its Origin, its Progress, its Power, and its Political Constitution, to the Period of its Declension in the Sixteenth Century. By P. H. MALLET, late Professor of History, and a Member of several Academies, &c. 8vo. pp. 339. Geneva. 1805.

THE effects of freedom and commerce, in increasing the power and wealth of a state or confederacy, present the strongest claims to the attention of a nation circumstanced as the British is at present: but we suspect that they have not been sufficiently considered by enlightened individuals, nor by men in public situations. In the volume before us, they will be found to be distinctly and perspicuously stated; and those who retain in their minds any recollection of the past services of the respectable literary veteran, from whose pen it proceeds, will not be surprized by the various claims which it prefers to the attention and acknowlegements of civilized communities.

M. MALLET supposes that the example of the cities of Italy roused those of the North, to endeavour to attain the rights and privileges to which the former owed their prosperity and consideration. This spirit more or less animated all the municipal bodies of Europe; and its workings were discoverable throughout the towns on the Danube and the Upper Rhine, those of Suabia and Saxony, those of Flanders, Brabant, Holland, Lower Germany, and those which bordered on

the North Sea and the Baltic. No sooner were these wishes formed by cities, than a disposition, occasioned by their necessities, was manifested by the Lords in whose vassalage they were, to comply with them either partially or altogether; the wealth, which traffic and industry had amassed, was exchanged for franchises and rights of great importance; and the chieftains, in return for present gratification, surrendered permanent power. This important barter, from which such serious consequences have flowed, commenced as early as the twelfth century. Still, however, the castle of the Lord frowned on the peaceable seats of activity and enterprize; and an *Avoyer*, or bailiff, continued to exercise parts of the former seigniorial oppressions: but, in the course of a century or two, these dread towers were no longer to be seen, or they were at least untenanted; the citizens had secured the right of self government, and that of providing for their own defence; ramparts, at that time impregnable, gave security to their residences; and the brave and simple inhabitants were at all times in readiness to defend them with resoluteness and valour. These communities, thus emancipated from the despotism of their immediate Lords, became anxious to guard themselves against foreign violence; and this desire suggested the plans of confederacies which were so frequent at the period of which we are speaking: while the anarchy, which every where prevailed, rendered extremely general the adoption of these expedients. Amid the confusion which followed in Germany on the deposition of Frederic II., all the traces of civilization would have disappeared, if they had not been fostered by these associations. About the year 1255, we read of sixty cities on the Rhine, which entered into a perpetual alliance for their mutual security.

It is conjectured that, about the same time, similar circumstances determined the cities on the coasts of the North Sea and the Baltic, to have recourse to similar precautions; and that the germ of the Hanseatic league was put forth about this æra. No monuments have been preserved, which record the origin and the early transactions of this famed confederacy: but the supposition, which refers its date to the latter part of the thirteenth century, cannot be very wide of the truth. The union, it is imagined, at first only embraced the maritime towns, and was probably no more than temporary. It is observed by one of the historians of the league, "that its commencement was feeble, its progress rapid, and its success astonishing;—and the confederacy, favoured by circumstances, dextrously availed itself of the advantages which fortune threw in its way." The first members, and their associates, remarks

M. MALLET, did not and could not foresee that they were laying the basis of a confederacy, which was destined one day to extend its commerce and its empire over the two seas of the North, to give laws to the inhabitants of their shores, and which would at pleasure humble and exalt, create and depose Kings. It was the maritime cities of Lower Germany that gave rise to the Hanseatic league, and it was navigation that made its fortune. This source had for a long time previously furnished them with subsistence, but they did not derive power from it till experience, policy, and wisdom, had consolidated and confirmed their union.

In the twelfth century, the shores of the Baltic, from Lubeck to Russia, were inhabited by Pagans. This barbarous population was partly converted and partly extirpated through the zeal of the Kings of Denmark, and the Dukes of Saxony. New inhabitants were transplanted into the districts which war had desolated, and the huts of the barbarians were replaced by the cities of Rostock, Wismar, and Stralsund. About the same period, Livonia was discovered; and the assistance which the confederated cities gave to the Princes, who were engaged in effecting the conversion of its inhabitants, caused many privileges to be granted to them, and led to consequences which greatly contributed to their subsequent prosperity.

From this time, the navigation of the confederated cities rapidly advanced. Cologne, Lubeck, Hamburgh, Sært, and Brunswick, obtained important franchises in England: their merchants and factors formed a corporation in London: they had a fixed residence and warehouses; and they held deliberative meetings in that metropolis. They were long allowed to extend and strengthen their commercial empire in this island; and they are known in our histories as the *Merchants of the steel-yard.* They were equally favoured in the North: they visited almost exclusively the Ports of Sweden, Denmark, and Norway; and they had penetrated from Livonia to Novogorod, one of the most considerable cities of Russia. We find them also employing an armed fleet against a king of Norway, who disputed the privileges which they claimed in his ports: they triumphed, and the Prince was obliged to re-instate them in their rights.

According to the author, in the thirteenth century, the Hanseatic league did not consist of more than ten or twelve cities, and those principally situated on the Baltic. In the century which succeeded, the association extended from the Scheldt and the isles of Zealand to Livonia; inland cities, and even large districts, sollicited the honour of being admitted members; while smaller cities were allowed to become dependants on it, and

were assessed to the general expence in proportion to their capacities.

In consequence of their war with Waldemar III. king of Denmark, they were induced to perfect their league; and it is conjectured that the act of general confederacy was first framed on that great occasion. The first mention of it refers to this period; and it was settled at an assembly of the deputies of cities, held at Cologne in 1364: but this great charter is no longer in existence. It was at the same time that the league assumed the name of *Hanseatic:* the word *Hanse*, in the language of Lower Germany, signifying *Corporation.*

Accounting for the successful resistance made by the members of the league against the Princes of Scandinavia, (the cradle, as it is believed, of nations, and the country of the fierce Normans,) M. MALLET observes that the ardour which was inspired by newly acquired liberty, the love of gain, and the dread of poverty and slavery, gave to the inhabitants of the associated cities a force which more than equalled that of half-peopled extensive provinces. The cities possessed union, subordination, and pecuniary resources: while in the monarchies the several orders were at variance, faction and disturbances predominated, revolution succeeded revolution, and feudal anarchy was at its height.

The government of most of the Hanse towns was formed, we learn, on the model of that of Lubeck. In this city, a senate composed of antient families and wealthy merchants possessed that power over the people which respect and confidence confer, and which was sufficient to enable it to promote the welfare of the state, but not to oppress it.—The author terms this

'A happy order of things, particularly in a limited republic: it was that which was most proper for its situation and its circumstances, most suitable to the spirit of the times, and to its foreign and domestic relations. The histories of this period exhibit to us various instances of the beneficial effects of such a regimen, and of its connection with a state of prosperity in which commerce could claim no share in the amelioration. We see at the same time the armies of the Northern Princes, which consisted of vassals, among whom was no subordination, who felt no attachment to their chiefs, and who served only for a limited time; opposed on the part of the cities by valiant, warlike, and well armed burghers, who had not been enervated by opulence, but who were in that state of moderate wealth in which liberty is most cherished. Their war-operations were combined and directed by the counsels of men of mature understanding and experience, who were devoted to their country, responsible for their measures, enjoyed the public confidence, and who shewed that they well understood the public interests, that they could treat with foreign Princes, profit by their

their divisions, and render them respectively the instruments of weakening each other.'

To the early exertions of this confederacy, Europe is indebted for the extinction of those hordes of Northern pirates, which so long ravaged the countries of the South, which so long kept society unsettled, and which threatened universal barbarism. We may judge of the terror which these visitations inspired, by a petition which is to be found in our old liturgies *.

As the war which the league maintained against Waldemar, king of Denmark, is a subject of general history, we shall only observe that the struggle rendered that association formidable and respectable in the eyes of Europe. It obtained the key of the sound, and the rich herring-fishery on the Southern coast of Sweden: at the peace, nearly the whole of Scania, two-thirds of its revenue, and all its strong places, were made over to the conquerors; a monopoly of the trade was confirmed to them; and in 1370, the league compelled Haquin, king of Norway, to renounce his crown. To exclusive possession of the trade of the three kingdoms of the North by the league, we must add the sway which it bore in Flanders, Brabant, Holland, and Zealand; the chief cities of which provinces were at this time included among its members; and at the same period, the league consisted of seventy-seven cities. To the South, the commerce of the Hanse towns was confined principally to Flanders and England, for it had never any establishments in France. Indeed it was not in those days very safe to navigate on the coasts of that country, because the barbarous right of shipwreck was admitted and sanctioned by its kings, while the Admiral shared in the infamous profits. The league carried on no direct commerce with Spain, Portugal, Italy, and the Levant, but purchased the productions of those regions in the markets of Flanders.

In the Hanse-towns, industry had made no extraordinary progress, and they manufactured only a very coarse kind of cloth. Their commerce falls under the description of what in modern times is styled the carrying-trade; since they purchased cloths in England and Flanders, which they sold in the countries of the North and the East. In the same way they dealt in the wines of the Rhine, the beer for which Germany was then noted, in grain and malt, in the linen cloths of Saxony and Westphalia, and in certain minerals and metals. This commerce would have been much more extensive, had it not been checked by the restrictions imposed on every species of industry in the German towns: it was therefore of little con-

" * *A furore Normannorum, libera nos, Domine.*"

sequence

sequence when compared with the exclusive trade which the members of the league maintained with the Northern kingdoms, and the immense regions of the North-East of Europe.

The question is here discussed, why did not the league, on attaining the proud situation in which we see it placed at the epoch of the peace made with Denmark in 1370, boldly renounce all dependence on the several states in which its members lay scattered, and also on the empire itself, after the manner of Swisserland? M. MALLET shews that want of contiguity of parts, and the genius of a commercial confederacy, would have rendered it impossible to have succeeded in a prospect so extravagant. History does not inform us that the league generally ever entertained a design of this nature: but it is supposed that the city of Lubeck aspired, by means of her fleets and armies, to subjugate a territory of sufficient extent to ensure the durability of her power, and to furnish a fixed residence for that empire over the seas of which she was already in possession. The object of the league in general seems to have been, to secure that portion of independence and liberty which it had acquired, to obtain additional privileges when circumstances favoured, and to extend its commercial relations. The renewal of the act of confederacy, in 1418, will inform us what were the principal views of the league at that period, and what it regarded as the principal ends of its confederacy. This act was decreed in a Congress of deputies at Lubeck, and was the first that embraced all the circles to which the association extended. The cities there mutually bind themselves to seek the glory of God, and to maintain peace and order in the cities and territories of the league against all the world, the Emperor alone excepted; reserving also what each confederate party owes to its lawful lord in honour and justice. They engage to assist and defend each other; and in case any member is attacked, the others are to attempt first by efforts of conciliation to restore peace, but, if the aggressor refuses it, and perseveres in his hostilities, then the injured party may demand of his confederates a succour, whether of men or money, proportioned to the amount which the *matricule* had fixed. If the succour was in men, they were to be ready in fourteen days to march to the *sister city*, which was bound to defray the expence of maintaining them. No city could declare war against a neighbouring Prince, lord, or city, without the consent and approbation of the four nearest cities of the league. If two cities of the league had any differences, they were in no instance to let strangers interfere in them, but the matter was to be left to the decision of other members of the league. The parties in such a case were to apprize the regency of Lubeck of the affair, which named four cities of the league, who were

were to decide the process by friendly mediation, or by a formal suit. No city had a right to enter into any treaty of peace without the participation of all the other cities of the league. A breach of any of these engagements subjected the transgressing party to a fine of one hundred marks.

This compact gives us a complete insight into the design and objects of the league. It was simply a defensive alliance formed by cities which were in a degree free, which were desirous of extending their privileges, and which were united by a regard to their common security and their commercial advantages. These confederacies owed their existence to the anarchy which prevailed in the empire; in which state of things, the weak had no resource, but in associations such as that into which the Hanse-towns had entered.—To certain cities, as members of the league, were entrusted the charge of watching over the security of the great roads, of pursuing and punishing the authors of violences, and the promoters of sedition and murders in great towns.

With respect to the government of the league, the writer informs us that the supreme authority was vested in the deputies of cities legally assembled in congress. There, laws and regulations were discussed, enacted, and promulgated: there it was that judgments and decrees were pronounced on the differences which arose, whether between the members of the league themselves, or between any of them and strangers; and to the same body it belonged to see its sentences carried into execution.

The seat of the congress was not fixed, but it was generally held at Lubeck, where its archieves were kept. This city, well situated for commerce, and enriched by it, had a great ascendancy in the league, and was regarded as its head. Numerous instances occur, however, of their meeting elsewhere, as in Hamburgh, Bremen, the cities of Lower Saxony and Westphalia, and even such as lay without the limits of Germany. The time of holding the Congress was not more fixed than was the place of its sitting, but was determined by circumstances and events. A decree of 1430 ordained that it should be assembled once in three years at Whitsuntide at Lubeck, if its necessities should not render more frequent meetings necessary: but we are informed that, in fact, scarcely a year passed in which it did not assemble. It was most commonly by the regency of Lubeck that the Congress was summoned to meet, but the councils of Wismar, Rostock, and Stralsund, sometimes performed the same office.

It is obvious that the want of continuity of territory rendered impossible the creation of a central authority sufficiently strong

to controul internal dissentions. In this confederacy, the power rested chiefly on a sense of common interest, which was kept alive by the constant pressure of external danger. The number of deputies requisite to constitute a legal assembly was never fixed, but the assembly itself at its meeting determined whether it was numerous enough to bind the confederacy by its acts. The attendance of thirty or forty deputies was generally deemed sufficient for this purpose.

As the external danger diminished, we find disunion prevail among the members of the league, and powerful cities refused obedience to the enactments of the supreme authority, while neither persuasions nor threats were able to remove their contumacy.—The foreign factories, those of London, Bruges, Bergen, and Novogorod, had a right to send deputies to the Congress of the league. They were allowed to make representations, but not to take any share in its deliberations. The ministers of foreign powers, those of the Emperor, of the kings of France, England, Scotland, Denmark, and Sweden, were admitted to audiences on the same occasions. At Lubeck, was a Hall in which the assemblies of the league were held, the vast extent of which serves to give an idea of its antient grandeur. One of the burgomasters of Lubeck presided on these occasions: on his right sat the deputy of Cologne, and on his left that of Hamburgh: the others usually had places according to the date of their accession to the society.

In the prosperous days of the league, the subjects of discussion in its assemblies were numerous and important. Commerce, an immense navigation, franchises, privileges of all kinds to preserve, to extend, and to explain, foreign factories to superintend and protect, negociations to carry on with the several states of Europe, measures to guide, to restrain, and to reduce to their duty the members of the confederacy, tumults and revolts to repress, instructions to demand, subsidies to furnish and to regulate, all these objects were definitively reported to congress, and engaged its attention during a long series of sittings. Whether measures were carried by a plurality of voices, or whether in some if not in all cases unanimity was unnecessary, we have not documents to ascertain.

At the close of the Session, the enactments were drawn up in one general statute, a transcript of which was communicated to each deputy, sealed with the seal of the city of Lubeck. It was forbidden to shew these statutes to strangers.—During the interval of the sessions of Congress, the direction of the general affairs of the league, internal and foreign correspondence, and other urgent matters, were latterly entrusted to a permanent committee of the deputies of Lubeck, united with the

deputies of five of the neighbouring cities. In a course of time, this committee attained to a very predominant influence in the deliberations of the general assemblies; and the city, in which it sat, was considered as the capital of the confederacy.

The league was divided into three circles; the first embraced the cities situated on the southern and eastern shores of the Baltic, the second those of Westphalia, and the third those of Saxony. In each circle, one city exercised the same sort of supremacy with that which Lubeck claimed over the whole extent of the league. The punishments inflicted by these assemblies never rose higher than to a privation of all the rights and franchises of the association, an interdiction of all commerce with its members, the sequestration of its goods, and an exclusion from its factories and establishments. A city thus treated could not be restored to its former situation but with great difficulty. Powerful recommendations, acts of submission, proofs of penitence, penances, pilgrimages, and masses, were necessary in order to obtain this favour; and fines were also imposed. The number of cities which formed effective members of the league at the time of its highest prosperity, it is conjectured, amounted to seventy-two: but if we include the dependent cities which contributed to its expenditure, and which were protected by it, the number was considerably greater.

As we have already observed, the league consisted of *associated* and *dependent* cities: the latter were farther divided into *allied*, *protected*, and *subject*. The governments of the several cities which formed the confederacy materially differed from each other; and M. MALLET ably points out the effects of these inequalities and discordancies, as they influenced the power and the permanence of the society. Contemplating these seeds of imbecility and dissolution, it is matter of astonishment that this league continued to flourish so long, reached so high a degree of power, and performed so many great atchievements: but the dangers which beset it, and the ignorance and anarchy which prevailed in other countries, account for the phænomenon. It produced valiant warriors, able seamen, and skilful statesmen, who conducted its affairs in a superior manner. The love of gain was purified by that love of liberty, by that sentiment of happiness and glory, and by that patriotism, to which all things are possible; and which compensates for every other want in free commonwealths, more particularly during the short periods in which they advance from weakness to power.

With the Emperor, the league is said to have uniformly coquetted; while it never respected his authority when it interfered with its views and interests, nor ever consulted him in

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regard to any of its measures. On the other hand, the Emperor, unable to controul, winked at its proceedings. It is true that the golden bull proscribed all leagues and confederacies, as contrary to the rights of the supreme head, and to the subordination that was due to him: but this was an empty fulmination; and Charles IV. the author of this famous edict, deemed it more politic to attempt by intrigue and address to get himself appointed head of the league, than to endeavour to carry his vain anathema into effect. The leaders of the confederacy, however, penetrated his designs, and effectually eluded them.

The peace of the league was now disturbed by the distractions which prevailed in particular cities that were members of it. The nature of the struggles between the aristocratic and democratic burghers, for which this period is remarkable, is here candidly and dispassionately stated, and accompanied by extremely temperate and wise reflections.

'In proportion (says M. MALLET) as the Hanseatic cities became opulent, that equilibrium which had been so long preserved began to disappear. Interests multiplied, and grew more complicated; it became necessary to place in the councils men of more address, and more imposing in their exterior. The credit of these dextrous individuals increased, and they intrigued in order to confine the magistracies among their relatives and friends. At length these places were entirely at their disposal; and thus, in this as in other respects, they left to the commonalty no more than a shadow of their former rights. The aristocracy obtained the ascendancy in almost all the cities, and in some the power was lodged in an oligarchy. At the same time, these cities were full of factions and dissentions, which principally broke out among the companies of artisans: in which class, by the force of natural eloquence, men were able to inflame the passions of the people to the highest pitch, and to direct their vengeance against their rulers. Many senators and burgomasters paid the forfeit of their goods, and even of their lives, because they had either justly or unjustly incurred the hatred of their fellow citizens. This picture applies very generally to the cities during the course of the fifteenth and sixteenth centuries.'

The ascendancy which the league obtained, in consequence of the triumph of its arms over Waldemar III. rendered it sufficiently bold to engage in warfare with the celebrated Semiramis of the North, the renowned and polite Margaret, and they employed against her the pirates known under the name of Vitalians: but a sense of common interest induced both these parties to make peace, and the league ceased to oppose Margaret in Sweden, while she confirmed them in all their antient rights. The league dreaded the effects of the celebrated union of Colmar: but the moderation of the heroine,

roine, and the weakness of her successors, prevented their apprehensions from being realized in their utmost extent. With Eric, the successor of Margaret, they carried on a fierce war; and the cities supported the brave counts of Holstein, who were the barriers to the South against the Scandinavian power. In this contest, however, the league appeared to little advantage, for disunion paralyzed all its efforts. The inland cities declined to make a common cause with the maritime; while those of the low countries deserted the confederacy, united with its grand enemy, Eric, and endeavoured to secure to themselves exclusively the monopoly which the league in general before enjoyed. From an early period in the fifteenth century, we are to date the schism in the Hanseatic association, which the secession of the towns of the low countries occasioned, and which very materially reduced its consideration and influence. In those seceding towns, it found active, indefatigable, and successful rivals. At the end of a bloody war of twenty-six years, distinguished by great exploits both by sea and land, fertile in ravages and calamities, the parties, severally wearied by the contest, agreed to a peace on the basis of the *status quo*. Eric retired from the cares of government; and, accompanied by his mistress Cecilia, he sought the calm of private life in the isle of Gothland. His abdication was followed by a confusion similar to that which we have witnessed in our own time, and which served to shew that, in a certain state of society, tyranny is a blessing when compared with anarchy.

In Christopher, duke of Bavaria, on whom at length the abdicated crown was conferred, the league had a decided enemy, but he died before he had been able materially to prejudice its cause. Under Christopher of Oldenburgh, and his son John, it had the satisfaction of seeing its enemy distracted by insurrections in his dominions. This state of things prevented open rupture, but by no means removed the inveterate jealousy with which the association was regarded by the Northern monarchs; nor did it prevent them from covertly exerting their influence to harass its navigation and commerce, and to favour those of their rivals the English and Dutch.

During the attempts of Christian II. sirnamed the *Bad*, to subjugate the Swedes, the latter derived the most essential assistance from the naval superiority of the league. By favouring the escape of the young Gustavus Vasa, the cities accomplished what had been so long the object of all their wishes and views, the dissolution of the union of Colmar; a measure which, as the present author observes, had been more the occasion of disquietude, than the cause of any mischief to

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the confederacy. Soon afterward, the league had the good fortune to see its *protégé* Gustavus reduce the whole of Sweden to his obedience, its enemy Christian II. deposed, and his Crown conferred on his uncle, Frederic duke of Holstein. The Hanseatic cities having joined the opponents of Christian, this was a sufficient reason for inducing the Dutch cities to aid him in recovering his dominions:—but the failure of this attempt is matter of history. On the occasion of the league having afforded material assistance to the Danes, it requested in return that the Sound should be shut against the Dutch: but this people disregarded the claims of the confederacy, and on every occasion favoured their rivals. We know not any instance of a jealousy more strong and permanent, than that with which the three Northern kingdoms regarded the Hanseatic league.

History has preserved the tragical particulars of the dreadful war waged by Lubeck, under the influence of the demagogue Wullenwer, assisted by the blacksmith Meyer of Hamburgh, against Denmark; which was indebted for its deliverance to its newly chosen monarch Christian III. who was as beneficent as he was brave. Wullenwer, who had changed the government of Lubeck, who ruled in it with absolute sway, and who, aided by his associate, the low-born hero Meyer, saw Denmark nearly subjugated, was destined at last to experience a reverse of fortune; his star yielded to that of the lawful monarch; and when success forsook his standard, the abject multitude, which had before adored him, sacrificed both him and his colleague to its disappointment.—This effort, though an irregular one, shews that the power of the league was very considerable: but from this time its political weight rapidly diminished. The neighbouring nations became sensible of the value of commerce; governments encouraged their subjects to embark in it; and the privileges and immunities of the league were every where abrogated. Their establishments were overturned in England: their exclusive rights were abolished in Denmark and Norway: Sweden favoured their rivals, England and Holland, and by conquering Livonia, excluded them from that country; while the British and Dutch supplanted them in Russia. Even the causes which had cemented their union had ceased to exist. In the year 1630, a congress was summoned to meet at Lubeck, but it was never held, because no deputies attended; while all the cities announced their secession from the league, and their desire no longer to be considered as members of it. Lubeck, Hamburgh, and Bremen, however, which had been previously united by particular ties, again renewed their association, and assumed the splendid designation of the Hanseatic cities. Their confederacy has been acknowleged by the several

veral powers of Europe, and its existence is recognized and ratified in the late treaty, which settled the German indemnities.

The commercial policy of the league is considered much at length in the present volume, but our limits will not allow of our entering on that subject at present. We would, however, refer the curious reader to the work itself; which is, in every point of view, highly creditable to its respectable author, and which forms a valuable supplement to the general histories of Europe. The rise, progress, decline, and extinction of the league are distinctly traced, its services liberally appreciated, and its faults and errors are ably pointed out. It is a correct and instructive performance, which displays a liberal spirit and sound judgment, and which intitles M. MALLET to additional consideration in the republic of letters. We feel great satisfaction in congratulating him on the occasion, and in recommending his labours to the attention of the public.

Jo.

ART. II. *Traité de Géodésie*, &c. *i. e.* A Treatise on Geodæsia, or an Explanation of the Trigonometrical and Astronomical Methods which have been applied to the Measurement of the Earth, &c. By L. PUISSANT, Professor of Mathematics in the Imperial Military School, &c. With Tables and Plates. 4to. Paris 1805. Imported by De Boffe. Price 1l. 4s.

THE measurement of an arc of the meridian, with the inferred measurement of the earth, has been recently accomplished by the mathematicians of France; and this operation called into existence and practice a great variety of curious and elaborate methods of computation. Science was thus improved; and the mechanical arts also were advanced, in contriving or in perfecting instruments of observation and of measurement. All those methods of computation which have been on this occasion invented and used, it is the purpose of M. PUISSANT to lay down and explain in the volume before us, which is of no inconsiderable bulk, containing between three and four hundred pages. If an English author presumed to print a work on such a subject, he would infallibly lose money by the publication: but, in France, mathematical readers are of late so amazingly increased in number, that scarcely a month passes without the appearance of some new treatise on abstract or physical science.

The present author, however, like many others, uses most unfair means for swelling his book; since he inserts matter which may be found, in greater abundance, in various other productions. Plane and spherical trigonometry, for instance, are treated;

treated; and though it is true that the principles and methods of this science must be known, by every one who would understand the methods by which the measurement of an arc of the meridian is accomplished, we see no juster ground for inserting such principles and methods in this volume, than for transcribing Euclid's propositions; because trigonometrical treatises are as abundant as geometrical. The evil of which we complain is of common occurrence; and, since books multiply with so great a rapidity, it ought to be pointedly reprobated.—In the particular instance before us, the notice allotted to the subject of trigonometry is not sufficiently ample and satisfactory; and for the perusal of this treatise the student must bring with him more copious information, or resort to other books for it: though in justice we must add, that the principle and plan of demonstration,—the same which *Legendre* has employed,—are exceedingly good.

The chapter which follows on the resolution of triangles under peculiar circumstances,—the sides of which, for instance, contain a very acute or a very obtuse angle, &c.—is more proper for insertion than the preceding sections: but its contents are to be found in *Legendre*'s trigonometry, which is now a work in common use on the continent.

Book II. of this volume is terminated by a digression, and an analytical research into the properties of the cone, and of the stereographic projection of the circles of the sphere. In this inquiry we have an application of algebra to geometry; and the author has adopted the methods used by *Monge* and *Lacroix*:—but might not the whole digression have been spared?

Book III. is dedicated to the special object of the publication, and contains an exposition of the various artifices and methods by which the measurement of the meridional arc is effected. It states also the necessary form and nature of the signals employed, and describes the instrument chiefly used, viz. the repeating circle of *Borda* (*le cercle repetiteur.*) This instrument is an improvement on the plan of *Meyer*, and is but little known in this country: but it has in France, we believe, superseded the quadrant and sextant. The latter is chiefly used by English navigators: yet instead of it two instruments have been recommended to their use, a reflecting circle by M. *Mendoza de Rios*, and another circle by Mr. *Troughton*, mathematical instrument maker. It is probable that, in a few years, the latter will force itself into general adoption: but it is not our present business to explain its uses and advantages:—*Borda*'s circle is described in the pages before us, and instructions are given for making certain corrections. In the Appendix, this description is resumed:

because,

because, since the first part was written, the instrument has been altered. This latter account is very full and satisfactory, and rendered evident by eight very good plates.

As the author advances, his steps are taken through ground more and more difficult. In the 11th chapter, formulas are investigated for expressing in functions of the latitude different portions of the terrestrial meridian, on the hypothesis of the earth being a spheroid of revolution. M. PUISSANT here avails himself of the profound researches of *La Place* and *Legendre.*

Dionis de Sejour was the author of a very ingenious memoir for finding the latitude and longitude of a place on the earth's surface, ascertained by its distances from the meridian and a perpendicular to another known place. As the method, however, leads us into formulas not sufficiently simple and direct, *Legendre* and *Delambre* have given, on the occasion of a new measure of an arc of the meridian, different formulas which are exempt from the preceding objection; and these have been used by most of the French engineers employed in the measurement of an arc of the meridian. In the 12th chapter of the work before us, M. PUISSANT explains the method, and deduces some of the formulas laid down by *Legendre.*

Of the 14th chapter the subject is the analytical theory of the earth, and the author gives an exposition of the method followed by *La Place* in his *Mecanique Céleste*; supplying some steps omitted by that great mathematician. Few discussions are more intricate than that which this subject affords.—This chapter passed, we found ourselves in less rugged ground, and accompanied the author while he shortly treated of terrestrial refractions, and of the measurement of stations by the aid and use of the barometer and thermometer.—The remainder of the volume is occupied with the solution of certain astronomical problems, and with tables amounting to sixteen in number.

R.W.

ART. III. *Mémoires de l'Institut National,* &c. *i e.* A continuation of the Memoirs of the National Institute. Vol. I. *The Base of the decimal Metrical System, or the Measure of the Arc of the Meridian comprized between the Parallels of Dunkirk and Barcelona, executed in* 1792 *and the following Years.* By Messrs. MECHAIN and DELAMBRE. Edited by M. DELAMBRE, perpetual Secretary, &c. 4to. pp. 550. Paris. 1806. Imported by De Boffe.

WE are here furnished with a detail of the operations, and an explanation of many of the subservient methods, employed in the measurement of an Arc of the Meridian. The enterprize being of national concern, and conducted at the public

public expence, this work is accordingly printed under the auspices of the most celebrated scientific corporation of France, and forms a continuation of or an appendix to their customary memoirs. What the National Institute now is, the Academy of Sciences formerly was; and if authority were wanting to the title of the present volume, it might be found in that of *Cassini*, relative to the measurement of an Arc of the Meridian, and similarly intitled *Suite des Memoires*, &c. of 1738.

Without any consideration, however, of former usage and precedent, this publication, as part of the memoirs of a distinguished incorporated society, is highly proper; since thus the work, as it ought, has a stamp of authority put on it, and is more likely to be preserved. We have acted on the same plan, since the labours of Roy, Mudge, &c. in the Trigonometrical Survey, are recorded in our Philosophical Transactions.

This volume consists of a preliminary discourse, and the detail and exact register of the operations carried on from Dunkirk to Barcelona. The second part is highly important and valuable, and, though not in the least interesting at the present moment, is worthy to be preserved, and may hereafter prove a precious relict: but in the preliminary discourse, we find much that must entertain the general and the scientific reader. It includes several anecdotes that are amusing, and some that strongly characterize the ignorance, bigotry, and mean jealousies of the conductors of the French Revolution; and with these are mixed many judicious observations relative to the enterprize itself, which are the fruit of long experience: with many admirable formulas and processes of computation, invented by the skill of the analyst for the convenience of the observer.

In the commencement of his preliminary discourse, M. DELAMBRE enters into a brief history of the discoveries and researches of the antients relative to the magnitude and figure of the earth. The first point only was to them a serious mental concern; since the slighest glimpses of convexity, in the figure of the earth, hurried them into the precipitate conclusion that it was spherical: an opinion which was agreeable to certain notions of simplicity in which they loved to indulge. The magnitude of the earth, and the means of ascertaining it, were not unknown to them; and we need not here explain the method of Eratosthenes. The antients, however, were rather just in the principle, and in the conception of the means by which the earth's circumference might be estimated, than exact in their measurement; and M. DELAMBRE is of opinion that they never actually measured an arc of the meridian, nor an arc of the equator. A passage in Aristotle is in confirmation of this opinion; and the coincidence between certain antient measure

sures and modern measures, which it has been attempted to establish, is considered by the present author as mere delusion. The record of the antient measures has been of late pointed out in the nilometer, and in the base of the great pyramid: but those authors, who have so ingeniously discovered what multiple the fourth of the earth's circumference is of these standards, have taken most undue liberties with their computed lengths. At least, the lengths which they assign to the nilometer, and to the base of the pyramid, differ considerably from the lengths which resulted from the measurement of the most skilful French engineers. M. DELAMBRE, indeed, is decidedly adverse to the notion that the earth, in times far remote, and of which we have no historical account, was exactly measured. After having commented on the errors of *Paucton* and *Bailly*, he says, 'We shall make no reflection on all these systems, built on such ruinous foundations; but it is matter of regret that the authors, who have taken such pains to find out, amid the works of the antients, the most valuable discoveries of the moderns, have not rather employed themselves in detecting *future* discoveries, which, without doubt, those works also conceal, and in instructing the present age in those facts of which they are now ignorant.'—We discover much truth also in this satirical remark:—'The idea of an invariable standard, it seems, is due to *Picard*, who proposed what he called his astronomical pendulum; *Cassini* suggested a standard of a different kind: but, as it is known, a certain part of the earth's circumference was assigned as an invariable measure, from which every thing in mensuration was to be derived.'—M. DELAMBRE inserts the reasons which determined *La Place*, *Monge*, &c. to prefer the measurement of an arc of the meridian to that of an arc of the equator.

The instruments used by M. M. MECHAIN and DELAMBRE were few and simple: the chief was *Borda's* repeating circle; and for the occasion, four circles were ordered to be made by *Lenoir*, who, we understand, is the Ramsden of France. The astronomers were also furnished with night and day signals, which are described in the work before us: but a less splendid appointment, perhaps, was never made by any Government; and the operations, moreover, were begun at the commencement of the disturbances which preceded and effected the French Revolution. M. MECHAIN set out to make his difficult observations among the wilds of the Pyrenées; but M. DELAMBRE's difficulties awaited him near the gates of Paris. Turbulent citizens examined his papers, viewed with suspicion his instruments, and destroyed his signals. He was occasionally obliged to deliver a lecture on the use of astronomical instru-

ments to a revolutionary auditory: yet the king's ministers, and the ministers of the subverting power, had, with great pomp, placed his papers, his instruments, &c. under the *safeguard of the laws*, and intrusted them to the care of the *Constituted Authorities*. Indeed, the situation of these delegated astronomers was by no means enviable: they were ill supplied with money, the carpenters appointed to erect their signals and stations were unskilful and ignorant, and they were daily denounced. Nor did obstruction to their operations originate solely from perturbed citizens and ignorant municipal officers: a decree of the committee of public safety, bearing the signature of *Barrère*, *Robespierre*, &c. ordained that *Delambre*, *Borda*, *Lavoisier*, *La Place*, *Coulomb*, *Brisson*, not being distinguished by their *republican virtues* and by their hatred of kings, should cease their operations; and the commission was especially enjoined to make all possible haste in communicating to the citizens the new measures, "*en profitant de l'impulsion revolutionaire.*"—Many parts of this preliminary discourse are valuable in an historical point of view, as they pourtray the extraordinary jealousies and suspicions which prevail among the lower orders, in times of turbulence and misrule, and the mean and ignorant policy of those men whom the Revolution had raised to a "bad eminence."

To the historical detail of the operations, succeeds a demonstration of several formulas commodious for such purposes: for instance, we have a demonstration of a formula for reducing angles in different planes to angles in an horizontal plane. Thus let H, h, be the heights of two objects; let A be the angle between them; and let x be the necessary reduction: then, by spherical trigonometry,

$$\cos.\,(A+x) = \frac{\cos. A \;\; \cos.\,(90-H).\cos.\,(90-h)}{\sin.\,(90-H) \;\; \sin.\,(90-h)}$$

or $\cos.\,(A+x).\cos. H - \cos. h = \cos. A - \sin. H \sin. h.$

The required demonstration is completed, when, from the preceding equation, x is found; and if n be put

$$= \frac{\tan.\frac{A}{2}\;\sin.^2\tfrac{1}{2}\,(H+h) - \cot.\frac{A}{2}\,(\sin.^2\tfrac{1}{2}\,H-h)}{\cos. H.\;\; \cos. h}$$

then

$$x = n.\sec. H.\sec. h - \tfrac{1}{2}\,n^2\,(\sec. H)^2.(\sec. h)^2.\cot. A \sin. 1'' + \tfrac{1}{2}\,n^3\,(\sec. H)^3(\sec. h)^3\left\{\tfrac{1}{3} + (\cot. A)^2\right\}.(\sin. 1'')^2 + \&c.$$

This formula was inserted in the *Connoissance des Tems* for 1793, and was demonstrated by Dr. Maskelyne in the Transactions of the Royal Society for 1797. The demonstration is given in a paper intitled "*An Account of the Trigonometrical Survey by Messrs. Mudge and Dalby.*"

The remainder of this volume is occupied with a statement of the actual observations, and of their results.

ART. IV. *Traité élémentaire d'Astronomie Physique*, &c. An Elementary Treatise on Physical Astronomy. By J. BIOT, Member of the National Institute of France, &c. designed for the Use of the National Lyceums and secondary Schools. 2 Volumes. 8vo. Paris. 1805. Imported by De Boffe.

A CLEAR and familiar, and at the same time a very exact and philosophical treatise is here offered to the world, by an author whose learned labours in the National Institute have already come under our critical notice. Instruction, whether by books or verbally, is a very nice and arduous task; we mean, instruction conducted with the greatest œconomy of time, and the least waste of mental labour. In teaching a particular branch of science, it seems to be agreed that we ought not, in the first instance, to be curiously careful in explaining every minute circumstance and particularity, but that we should rather exhibit a general view of it and expose its principles; devoting subsequent essays to the use of stricter investigation, and the gradual correction of imperfect notions.

In no very extended compass, a general view might be given of the foundation, use, and methods of astronomy. It would be necessary to speak of the altitudes and distances of heavenly bodies, of the measure of time, &c. but, with reference to the end to be attained, it would be injudicious to explain all the experiments and computations by which, from apparent altitudes and distances, true altitudes and true distances are determined. Again, it would be necessary to speak of the elliptical movement of the planets: but it would be improper, in the first instance, to explain the many and small equations belonging to such movement: corrections and equations being the proper subjects of future consideration. Reasons similar to these render it convenient, in an astronomical treatise, to go over the same ground several times, but repeating each successive investigation with increased care, nicety, and exactness;—and reasons not altogether dissimilar have influenced M. BIOT in the arrangement and structure of his treatise.

He begins, we think, in his scheme, at too low a gradation, for he imagines his student to be unfurnished with any astronomical knowlege whatever; and he is, perhaps, unnecessarily candid, when he supposes him to be infected with prejudices directly militating against the truths of astronomy. On this account, the student and reader may be slightly incommoded with a little superfluous prolixity, but they will find ample recompence in the illustrations and luminous explanations which are every where, in conformity to its plan, diffused over the performance.

M. BIOT

M. Biot treats in Book I. of the convexity of the earth, of the atmosphere, of atmospherical refraction, of the equator and meridian, of the poles of the equator, of the parallax of stars, &c. In Book II. he enters on a more arduous subject, the theory of the Sun, which is thus very neatly introduced :

'In the first book, we have determined, from certain facts, the form of the earth, its dimensions, and the place which it occupies in space. We have found, in its configuration, fixed data, by which the position of points in the heavens may be exactly ascertained; and on the strength of these results we are able to follow and to determine all the motions of the stars. But since one sure route alone conducts to this end, and since it is of consequence previously to know it, I proceed briefly to indicate it. When a body is rapidly moved near the earth, we may, if we have observed it, ascertain nearly the direction and route which it followed: but, at the distance at which the stars are fixed, their motions are too slow to be discovered by our eyes: we are consequently able to ascertain them only by comparing their positions observed at different epochs, and thus we discover that they have changed their place in the heavens.

'After the same manner as when we wish to trace a curve line, of the form and law of which we are ignorant, by determining from observation some of its points, and then by uniting them with a continuous line: so, to determine the motions of the stars, we observe each day the point in which they are found on the celestial sphere, and then we investigate the form of the movement, by the condition that the star has passed successively through all the positions, according to the order in which they have been observed.

'The place of the star is found each day, by observing its meridian altitude at the instant of its passage over the meridian. From the height, its declination is known; and from the instant of its passage, we obtain its right ascension, with reference to the point of the heavens which is chosen. These data determine the point at which the star is found on the celestial sphere.

'If we mark all these points on a globe, on which are traced at right angles two great circles representing the equator and the meridian, their union would form on the globe the representation of the march of the star along the heavens. We are enabled, by calculation, to perform this operation with much greater accuracy, and to trace the true curve described by the star; and thus we mentally fix the routes of the stars on the celestial sphere.

'It only remains, then, to determine the variations of their distances, which are necessary to complete the knowlege of their movements For this purpose, the observations of their apparent diameter are employed. which augment as they approach and diminish as they recede. Or, if their diameter be too small, which is the case with comets and with most of the planets, they are compared with heavenly objects, as for instance the sun, whose path has been previously determined by these processes.

'In proportion as the observations accumulate, they are collated the one with the other. They are corrected, in selecting for each the most favourable conjunctures; those for instance, in which the quantities

quantities required are found isolated, and in their state of greatest augmentation. Thus the *state of the heavens* is exactly known and we are enabled to ascertain what is constant, what is variable from day to day, or from year to year, or what is variable within grea er intervals.

'At this point, astronomy of observation terminates, and theoretical astronomy commences. Similar phænomena are compared for the purpose of discovering their relations; that is to say, the great laws to which they are subjected, and which form, as it were, the common source whence they are derived. The next inquiry is, what, according to the rules of mechanics, ought to be the force acting on the heavenly bodies, so that these laws may exist, and that the motions may be such as are really observed? At length, we are enabled to determine these forces, and to perceive that only one law is common to all the stars, mutually impelling each towards another in the proportion of the inverse square of the distances, and which has been called *attraction:* by which name, it has not been intended to express its nature, but solely the manner of its action. The effects of that force, modified by the separation of different celestial bodies, produce all the astronomical phænomena, which are thus explained in their minutest details; and astronomy becomes a grand problem in mechanics, of which all the elements are given by observation.—Then it is that we may remeasure our steps, and reduce in number the formulas of the celestial movements, derived from the knowlege of their causes, and form what are called astronomical tables. By means of these tables, we know precisely what will be the state of the heavens in future, and what it has been in past ages. They furnish to navigators the means of ascertaining their course, to geographers the signals for determining the p sitions of places, to husbandmen the regulations for their labours, and to nations, epochs for fixing their history. Astronomy thus arrives at its definite result, which is, in its case, as in that of all sciences, the general utility of society:—but, in order completely to attain this end, it requires the most extreme accuracy; and this is the constant object of all astronomers. It is difficult to conceive the degree of precision to which they have arrived, but some judgment may be formed of it from this single fact: If we direct to day a telescope towards a determined point in the heavens, we may foretell, at the distance of several years, the day, the hour, the minute, the second, at which a certain star will be found exactly placed in the centre of the telescope, and there cover a thread more fine than a hair. The errors of the actual tables are comprised within the thickness of this thread.'

If our limits permitted, we should willingly make extracts from the succeeding chapters: the third, especially, might be proposed as a model of familiar and perspicuous explanation.

An immense interval occurs, which is filled up with curious and laborious observations and investigations, between the solar theory presented under a general point of view to the young

student, and the solar theory such as the accomplished astronomer contemplates. If we observe from day to day the meridian altitudes of the sun, we shall obtain, from the knowlege of the latitude, his daily declination: from a comparison of the time of his passing the meridian, with the time of the passage of a fixed star, we derive a knowlege of his daily right ascension: these two motions are perpendicular to each other, and the sun's motion is along the diagonal which connects their extremities. This motion is performed along a path called the ecliptic, which intersects the equator in two points: the angle of inclination at the point of intersection, or the obliquity of the ecliptic, is determined by observation on the meridian altitude of the sun at the time of either solstice:—when the obliquity is known from the observed declinations, we are able, by the solution of a right angled spherical triangle, to determine the longitude, and thence to form what may be called tables of the sun. These are constructed after a great number of observations have been made; and the differences of the daily longitude may, by repeated observation, be rendered very exact, since such differences are again produced every year, in the same order. Some uncertainty, however, may hang over them, dependent on the epoch in which the sun had a particular longitude; for example, on the instant of time at which the sun entered the plane of the equator. Some doubt also may be suggested concerning the true value of the obliquity. In order, therefore, to correct the tables, these two elements must be rectified.

Here new researches are to be pursued by the observer and calculator; and in fact, at almost every point of our travels through astronomy, routes of necessary digression branch off, which cannot be investigated without aid and resources drawn from various departments of science. For the attainment of exact corrections for the cases which have been mentioned, neither observation nor calculation is completely adequate; and the reason is, that the law of refractions is not exactly known: for the declination is deduced from the meridian altitude, and from the latitude: but to know the latitude, we must know the law and quantity of refraction; and if a plain proof were required, that the law of refractions is not exactly known, it may be had from this fact: that the obliquity deduced at the summer solstice does not coincide with the obliquity deduced at the winter solstice, applying to each the common formulas which are supposed to involve the law of refractions. On this account, in France, some alterations have been made in Bradley's tables: *Delambre* has made such, and has in consequence altered the latitude of the national observatory, diminished

what

what may be called the summer obliquity of the ecliptic, and increased the winter. The table of refractions, however, substituted instead of that of Bradley, does not succeed for altitudes near the horizon.

By the corrections introduced by *Delambre*, the obliquity was determined to be in French measure 26 deg. 0735; or, according to our division of the circle, * 23° 27′ 58″, 14. In 1786, M. *De Lalande* made the obliquity 23° 28′; in 1769, Dr. *Maskelyne*, 23° 28′ 8″, 5.

From what has been said, it appears that the determination of the obliquity of the ecliptic, simple as the problem at first seems to be, leads into long and laborious researches, and exacts a knowlege of the laws of several phænomena. The determination of the other point, the exact time of the sun's entering the plane of the equator, is also productive of investigations. The sun's mean motion is not precisely ascertained, since we cannot place implicit reliance on the accuracy of ancient observations. According to M. *Delambre*, the true value of

Jours.

the year in French measure is 365 242250; or, according to

Days. h. m. s.

us, 365 5 48 50, 4.—M. *De Lalande*, in his *Mémoire sur la veritable longueur de l'Année Astronomique*, determines the

d. h. m. s.

length of the solar year to be 365 5 48 48.

If we were to proceed farther into the solar theory, the next step ought to be taken in order to discover the laws of the sun's motion; for hitherto the sun has been supposed moving in a great circle of the heavenly sphere: to effect which, we have two kinds of data,—the angular motion of the sun deduced from the mensuration of his altitudes, and the variations of his distance deduced from the variation of his apparent diameter. By duly examining these, we are enabled to discover that his angular motion is irregular; in what points the angular motion is greatest and least; when the sun is nearest to and

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* It may be useful to many of our readers if we communicate to them an easy method of reducing French degrees, &c. to English.

Suppose, for instance, the number of degrees, &c. to be	26 073 5
Subtract the number, moving the point one place to the left	2 607 35
	23°, 4665
Multiply by 60	60
	27, 96900
	60
Ans. 23° 27′ 58″ 14	58, 14000

when most remote from the earth; and, after no very long processes, to determine the laws of the sun's angular velocity, and to ascertain Kepler's great laws, that the areas are proportional to the times, and that the solar orbit is an ellipse, the earth occupying one of the foci.

In a farther progress, it would be found necessary to determine the longitude of the apogee, and its annual motion; and to form tables by which a correction may be applied to the sun's uniform motion, dependent on the distance from the apogee. This correction is an angle, called *Equation of the Centre*, or Equation of the orbit: but, to use the idiom of a learned language, *day would fail us*, were we to attempt to give an explanation of the several methods, artifices, &c. necessary for rendering complete and perfect the solar theory. For a clear, neat, and precise explanation of this and of the lunar theory,—a subject of greater complication,—we may refer to the work which is now before us. The subjects of this production are not, as it may be supposed, novel, and therefore we may be excused from particularly discussing each: but we should be deficient in our duty, if we did not state that almost every topic is luminously and ably treated. Those who are terrified by the thronged symbols and mighty calculations of *La Place* may take refuge here, and learn the principles and processes of astronomy without violent mental exertions; while those who venture to follow the steps of that great master may usefully avail themselves of the friendly and plain directions of M. Biot. We hope that we have said enough to recommend his publication to all who cultivate or who wish to cultivate astronomical science. R.W.

Art. V. *Considérations sur les Êtres Organisés*, &c. Considerations relative to Organized Beings By J. C. Delametherie. 2 Vols, 8vo. Paris. Imported by De Boffe. 15s. Boards.

The author of these volumes must be well known to most of our readers, by his various scientific publications, and as the editor of the *Journal de Physique*. His object in the present work is to take a general view of all living Beings that exist on our globe, to trace the analogies and resemblances between the different species, and to mark the gradations in structure and functions which may be observed to take place, from the most simple to the most complicated. Both animal and vegetable bodies fall under his consideration; and indeed a principal part of the novelty of his treatise consists in the extent to which he has carried the analogy between these two classes of bodies. On this subject, much ingenuity has certainly been exercised, and occasionally with effect; yet we confess

confess that not unfrequently his points of resemblance appear to us fanciful and unfounded.—Another peculiarity consists in the number and minuteness of the divisions and subdivisions under which he arranges the different branches of his inquiry. We cannot afford our readers a better specimen of both these characteristics, than by abstracting from the introduction the different systems, as he calls them, into which he has divided the animal body, and the analogous parts which he has traced in the vegetable kingdom.

In the animal body, it is stated, we observe the system of the cellular tissue, of the serous membranes, of the mucous membranes, of the fibrous membranes, of the fibro-serous, of the fibro-mucous, of the sero-mucous, of the membranes of cysts, of those of scars, the epidermoid system, the hairy, the dermoid, the dermoid coloring, the bony, the cartilaginous, the muscular, the glandular, the exhalent, the inhalent or absorbing, the system of the vital forces, of the organs of nutrition, of those of respiration, of the circulation, of reproduction, of the external organs of sensibility, and of the internal sense of sensibility. The parts of the vegetable are arranged nearly in the same manner, under the following systems; that of the cellular tissue, serous, mucous, fibrous, and horny membranes, the nucleous system, that of the fibro-serous membranes, of the fibro-mucous, sero-mucous, of scars of cyst, the epidermoid system, the hairy, thorny, dermoid, dermoid coloring, of the tracheæ, of the medullary part, of the sap vessels, and glands, the exhaling, inhaling, and moving systems, that of the vital forces, of the organs of nutrition, of respiration, of the circulation, of reproduction, of external organs of sensibility, and of the internal sense of sensibility.

We are next presented with a new methodical classification of organized Beings, which, we are informed, is principally founded on their structure. After the grand division into animals and vegetables, the former are placed under the two heads of those with and those without bones. Animals with bones consist of the five orders of the mammalia, cetacea, birds, reptiles, and fish; those without bones are divided into thirteen orders, the characters of which appear to be less distinct in proportion as our knowlege respecting the animals themselves is less precise. From what may be called the lowest order of animals, the rotiferæ, the author proceeds to the tremellæ, a class of bodies which he regards as intermediate between animals and vegetables; and from these he goes on to the confervæ and the fuci, and concludes with the more perfect vegetables. We cannot approve this plan of considering the animals and vegetables as forming a part of one

connected

connected chain, which, beginning with the most perfect animals, proceeds to the less perfect, from these to the less perfect vegetables, and afterward to the vegetables that are more completely organized. We deem it more natural to view the most perfect animals and vegetables as each forming the commencement of a distinct tribe of Beings; which, as they descend into a less complicated structure, exhibit less peculiarity of organization, and consequently fewer points of dissimilarity.

Volume I. consists of three sections; first, on the general structure of organized Beings, the second, on the organization of vegetables, and the third, on that of animals. The author begins with some remarks on the composition of the parts of organized Beings, and first of the cellular tissue, the form and distribution of which he describes with considerable minuteness The extent of this substance is generally acknowleged by anatomists, and in particular it is supposed by them to enter largely into the composition of muscles: but M. DELAMETHERIE goes so far as to deny the existence of any distinct muscular fibre. The substance which has usually been called by this name he considers as being only a collection of blood-vessels, lymphatics, and nervous filaments, bound together by a cellular tissue, a portion of jelly and of fat being deposited in the interstices. As a consequence of this opinion, it follows that the author does not admit any essential difference between fibrine and cellular substance; which last, he imagines, possesses irritability and all the chemical properties that are usnally attributed to the former.—His idea respecting what may be called the organization of the cellular substance is not less singular, and may be traced to that fondness for analogy and generalization which is so conspicuous throughout the work. He lays down the following proposition, which he afterward extends to the vegetable kingdom:—'Animals are composed of small plates or regular molecules, which, by the laws of affinity, arrange themselves according to certain laws in conformity with the theory of chrystallization.' He indeed candidly confesses that he has not been able to detect these molecules, nor to determine their primitive form; a confession, which, in our opinion, amounts to a complete acknowlegment that the hypothesis is without foundation.

We then meet with some novelty (perhaps more novelty than judgment) in remarks on temperaments. The author adopts the four usual divisions, but he changes the appellation of choleric to that of bilious. Their differences, he imagines, principally depend on the dryness, strength, and tension of the fibre, together with the degree of excitability, and the presence or defect of the reproductive fluid. He thinks that a real difference

ence subsists in the composition of the blood in these various states; that in the melancholic and bilious, it contains more carbon, in the sanguine more oxygen, and that in the phlegmatic it is deficient in the usual proportion of iron.

To these remarks succeed an account of each of the orders into which the author divides organized Beings, beginning with the mammalia, and proceeding through the different animal tribes to the tremellæ, and so on to the more perfect vegetables. This part of the work displays a considerable extent of knowlege, and conveys much information: but it is deformed by the intrusion of many unfounded speculations, and the assumption of facts which rest on dubious authority. M. DELAMETHERIE enters on the inquiry, and pursues it to a considerable length, whether man be in any respect essentially different from other animals; he concludes that he is not so; and he attempts to shew that the supposed differences, which have been pointed out between man and the most perfect ourang-outang, are less distinct and important than those which exist between the European and many tribes of savages. As far as the corporeal structure is concerned, we think that he is correct: but, notwithstanding the indications of reason and the great powers of imitation which have been exhibited by some individuals of the ape species, we must still flatter ourselves that the human intellect is of a nature essentially different from that of the monkey.

The sections on the organization of animals and vegetables are principally interesting, in consequence of the attempts that are made to establish the existence of the great variety of parts which have been already enumerated, and of the analogy which the author is so fond of discovering between the two kingdoms of nature. On both these subjects, we give M. DELAMETHERIE credit for learning and ingenuity: but we are obliged to temper our approbation by remarking, that our confidence in his reasoning is much weakened by the tendency which he displays to deviate into hypothesis and speculations, and by the ease with which he appears to admit facts that favor his opinions, however weak may be their foundation.

Having in the first volume occupied himself with considering the structure of animals and vegetables, the author proceeds in the second to give some account of their functions. The fourth section treats of the vital forces of organized Beings. According to his usual custom, he is anxious to point out the perfect analogy between the two kingdoms of nature, and labours to prove that vegetables possess an irritability or excitability in every respect similar to that of the animal body. We cannot, however, say that his attempt has produced complete conviction

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on our minds: but we leave this discussion, and hasten to make our readers acquainted with a much more singular hypothesis in which the author indulges himself, and on which he builds a large part of his future speculations, viz. that Galvanism is the cause of the irritability or excitability of the animal fibre. This opinion he chiefly rests on the phænomena of the torpedo, and an experiment performed by *La Grave*, in which, by a pile of alternate layers of muscle and brain, he produced, as he supposes, the effect of the Galvanic apparatus. He thinks that in the living body the nerves and muscles are intimately blended together, and form what may be called a natural Galvanic pile; and that the brain secretes a fluid charged with Galvanism, which is carried by the nerves to all parts of the body. Our limits will not permit us to enter on a complete examination of this hypothesis: but, with respect to the action of the torpedo, on which it is principally rested, we may remark that the organ, by means of which this animal produces the electric shock, is a series of cells divided by membranous matter, and therefore by no means resembles the alternate layers of muscles and nerves of which the pile of *La Grave* was formed. Indeed, the experiment of *La Grave* itself rests at present on his single authority; and, considering its delicate nature, it certainly would require farther confirmation, before we could admit it as the basis of a theory. On the whole, we do not hesitate to declare it as our opinion, that this hypothesis is defective in its foundation, and unsupported in its detail.—Yet more extravagant is the attempt to extend it to vegetable bodies, by supposing that their fibrous and medullary matter act on each other, elicit the Galvanic fluid, and thus produce those spontaneous motions which are occasionally found in some tribes of plants.—Still we have not exhibited all the peculiarities of this author's doctrines; granting that Galvanism elicits the excitability, how does it produce the phænomena of muscular contraction? This, it is conjectured, is effected by the heat which accompanies the extrication of the Galvanic fluid acting on the muscular fibre, and *crisping it*. 'I suppose,' says the author, 'that it is the same cause which makes a piece of skin contract that is brought near the fire, or on which is poured a concentrated acid, a caustic alkali, or any other caustic body.' On this novel speculation, we deem it unnecessary to make any comment.

The functions of nutrition, respiration, and circulation, each form the subjects of distinct sections, on which we feel inclined to bestow the same character that we have already given to former parts of the work. The next article, on secretion, may claim somewhat more of our attention, since it has at least the merit

merit of ingenuity to recommend it. M. DELAMETHERIE attempts to explain the hitherto inexplicable operations of this function, by supposing that it is produced by chemical affinity: in a vessel containing a mixed solution of several salts, each salt crystallizes separately; and in the same manner he imagines that the secretions, which previously exist in the blood, when they arrive at the organs destined for their separation, meeting there with a portion of a similar substance, are attracted by it, and disunited from the mass. To this hypothesis it may be objected that we have no proof that the secretions do exist in the blood; and also that, admitting the fact, it affords no explanation of the difficulty, because it does not even profess to shew how the secretions are originally formed. To the same force of affinity, residing in particular parts of the body, is ascribed the local specific action of medicines; antimony has an affinity for the stomach, and cantharides for the urinary organs. We doubt whether this hypothesis will afford any real solution of the difficulty; since we not unfrequently suppose that we acquire new ideas merely by adopting new forms of expression.

From the remarks which we have made on these volumes, our readers will conclude that we consider them as intitled to material commendation, at the same time that they are open to much animadversion. By a more strict attention to well ascertained facts, and a more cautious use of hypothesis, M. DELAMETHERIE might have produced a work that would have afforded a large fund both of instruction and amusement; whereas at present we feel it impossible to place implicit confidence in his statements, and are perpetually prevented from following him in his speculations by the obvious weakness of many of his fundamental propositions.

We cannot notice publications of this kind without lamenting that men of science should give way to the indulgence of theories, in preference to a patient examination and record of facts. Our physics should be facts; and philosophers, though they may amuse themselves with conjectures in their closets, should abstain from promulgating them till some solid ground is obtained on which they can be erected: otherwise, we multiply words and books without adding to the stock of our knowlege.

Moy.

Bos.

ART.

ART. VI. *Géographie Statistique*, &c. *i. e.* The Statistic, Hydraulic, Mineral, Historic, Political, Commercial, &c. Geography of all Parts of the World; including the History of the antient Provinces of France, and of the Countries conquered and united to it since the Year 1792; the Chronology of all those who have governed France from 440 Years before Christ to the present Time; antient and modern Institutions; great or celebrated Men, with the Works which they have published; Sieges and Battles, with the Places at which they have been fought, and the Names of the Generals who have commanded; the new Weights and Measures; the Coin of different Nations, and comparative Tables of their different Value. By D. L. M., formerly Professor of the University of Paris, and Member of several Academies. With a Plate of the Planetary System, by M. *Letronne*, Pupil of M. *Mentelle*. A work calculated for the Instruction of Youth, and useful to Merchants, Travellers, Public Functionaries, Bankers, Brokers, Men of Letters, &c. With 138 coloured Maps. 4 Vols 8vo. and a separate Atlas. Paris. 1806. Imported by De Boffe. Price 2l. 2s.

LARGE promises are made in the title of this work; and, if it tolerably fulfilled them, the price could not be deemed exorbitant: but all readers, excepting the natives of the *Great Nation*, must feel considerable disappointment from an examination of it. Of the four volumes of letter-press, containing the geographical, &c. relations, the first and second are devoted to France, the third to Europe, and Asia, Africa, and America are compressed into the last. To assign so great a share of this view of universal geography to the single empire of France may appear strange: but the author, not contented with avowing his patriotic partiality, openly declares that he considered it as his duty to allot to his country a space 'proportioned to the rank which it occupies among the European states, and the part which it plays in the world.' According to this account, France possesses as much importance as all the other nations of the globe combined; at least in this Frenchman's estimation.

We are informed that geography in itself is a dry study, presenting little that can exercise the imagination; for which reason this "terraqueous maid" is here associated with history, chronology, biography, natural history, &c.—a captivating groupe, by which the forbidding features of the principal figure are designed to be concealed. If this had been a new contrivance, we should give the author full credit for it: but, according to the best of our recollection, compilers of geographical systems have, for the most part, pursued the same method, and consulted the entertainment and instruction of the reader by employing similar auxiliaries.—The details respecting

ing France are sufficiently minute, and are illustrated by a separate map of an octavo size, for each of the departments: but the accounts of the other parts of the world are greatly curtailed; and though the author professes to speak at length of New Holland, New Zealand, &c. the notices are very brief, and no map is given of this fifth quarter of the globe, as it has been called. Indeed the Atlas is a disgrace to the publication; for the maps, though said to be *dessinées et gravées avec soin*, are miserably executed: an inferiority which we should not expect in a publication of this kind; because the French excel in their maps, and often surpass us in this department of geographical works.

The opinion of M. *Mentelle*, member of the National Institute, is quoted, relative to the measurement of the earth's superficies.

'It is not possible (says this geographer,) to calculate with exactness the quantity of land which the surface of the globe contains; because we are not acquainted with the limits of America towards the pole; because we are not sure that the interior of Africa does not contain some great lakes, and that New Holland is not diminished by Mediterranean seas and gulphs; in short, because some little tracts of unknown land may exist towards the two poles, and a frozen continent near the south pole, though this is not very probable. Let us suppose the unknown parts to be equal to 1,000,000 square leagues. However this may be, we may reckon the extent of the *old* continent at 4,'60,000 square leagues, of which Europe contains 500,000, Asia 2,100,000, Africa 1,560,000, and that of the *new* at 2,100,000 square leagues, (and perhaps at 100,000 more,) of which South America contains 960,000, and North America at least 1,240,000. New Holland might measure 400,000; and all the islands, not comprized in the five parts of the globe above enumerated, make 300,000 more; so that the surface of all the regions of the earth, with which we are acquainted, will amount to nearly 6,960,000 square leagues, being about 100,000 square leagues more than a quarter of the whole surface of the globe.'

What pains M. *Mentelle* has taken to attain exactness, we know not: but we must remark that his numbers do not tally with those which are given in the subsequent parts of the work; since the extent of Europe is said to be only 171,834 square miles, and that of Asia, without the islands, 2,076,000 square leagues. Of Africa and America, no mensuration of their surface in square leagues will be found in the departments appropriated to their geography.

In the comparative table of the different measures, according to which distances on the earth's surface are counted, the English mile (measuring 1760 English yards) is said to be equal

equal to 760 toises, or 1520 French yards: but this account cannot be exact: since, allowing the French foot to exceed the English foot a whole inch, (which is more than it does, the French being to the English foot only as 1066 to 1000,) the English mile, according to this reckoning, would be only 1520+126=1646 yards.

The whole population of the earth is stated at 1,080,000,000.

We are presented with distinct abridgements of the state of France, under the monarchy, and subsequent to the revolution. The first contains tables of the several races of kings; and the second gives a chronological arrangement of the most remarkable events which occurred from the proclamation of the Republic, September 22, 1792 (called 1st year) to the appointment of Napoleon Bonaparte, Emperor of the French, May 18, 1804 (year XII). The French Republic is said to have an extent nearly equal to that of Gaul in the time of the Romans, the empire comprising all the countries which formed monarchical France, with the following additions, viz. the *comptât* of Avignon, the duchy of Bouillon, the Repnblic of Mulhausen, the principalities of Montbeliard, Porentruy, and Salm, the republic of Geneva, the *comté* of Nice, Savoy, Piedmont, Belgium, Dutch Flanders, Dutch Brabant, with all the territory on the left bank of the Rhine, Maëstricht, Venloo, and their dependencies, and the isle of Elbe; and as if these aggrandisements of territory were not sufficient, the end of the second volume furnishes an account of the annexation of the Republic of Genoa to France, and of its division into three departments, viz. of Genoa, Montenotte, and the Apennines. When, in the general view of France, the admeasurement of her surface is stated at 31,385 square leagues, and her population at 34,468,312, we infer that Genoa is not included in either, as Leghorn is not mentioned among the ports of France in this section; nor are either of the three Genoese departments inserted in the list of the departments composing the French Republic. The population of the isle of Elbe is expressly excluded from the above statement.

Great, however, as this number appears, the author has represented the population belonging to the British monarchy as far exceeding it: but, in order to effect this object, the electorate of Hanover is joined to Great-Britain and Ireland, with all the dependent isles, as constituting our European possessions; to which our empire in the east and our colonies are added. The account stands thus:

The extent of the territory in Europe belonging to the British monarchy contains 17,160 square leagues.

The

The European population is -	14,303,087
Possessions in India, indefinable (*indeterminable*)	
—in Canada 38,000 square leagues; population	23,000,000
In America - -	1,000,000
In 1801, by the treaty of Amiens, the island of Ceylon was ceded to the English, containing 4,800 square leagues; population -	4,000,000
Conquered in 1779, chiefly from Tippoo Saib, 5,730 square leagues; population about	4,000,200
Total of the population	46,303,087

It is not difficult to penetrate the motive for this wonderful display of British population: nor are we flattered by it. If the population of our foreign possessions and colonies is to be reckoned, why did not this writer pursue the same method in stating that of his own country? England, perhaps, is to be told that, with a population at command of 46,303,087, she ought not to be alarmed at the aggrandizements of France; which, including the conquered countries, counts her inhabitants at only 34½ millions: but we cannot be the dupes of such shallow artifice. On the contrary, we know that our distant possessions drain our population; and that, though they add to the riches, they do not augment the physical strength of the state.

These volumes conclude with short notices of the principal discoveries which have been made by modern navigators of different nations; and to the whole is subjoined a very full *table alphabétique des matiéres*, or index, which is a necessary appendage to a work of this kind.

Mo-y.

ART. VII. *Mémoires d' un Voyageur*, &c. *i e.* Memoirs of a Traveller now in retirement. Containing historical, political, and literary Anecdotes relative to several of the principal Personages of the Age. 3 Vols. 8vo. 1*l.* 4*s.* 0*d.* Boards. Dulau and Co. London. 1806.

THESE memoirs proceed from the pen of M. DUTENS, whose writings have, on different occasions, solicited our notice: but in this publication he resumes the name of *Duchillon*, by which he was distinguished from the rest of his family, on account of a small estate annexed to the younger branches. The quantity, diversity, and interest of the matter contained in his narrative, require that, without farther preface, we should sketch its principal outlines, and present a few extracts and remarks to the consideration of our readers.

Part I. of the Memoirs consists of thirteen chapters, which unfold, in a lively and attractive manner, the author's history, from his birth to his entrance on public life. His fa-

mily, we are assured, is very antient, *and requires only to be known*—assertions which we may credit without any violent stretch of faith:—but when *Moreri* mentions that one of them, who was equerry to Charlemagne, lived to the age of three hundred and sixty years, and when *Daubigné* speaks of another, in whose favour heaven performed a miracle, we are seized with a fit of involuntary scepticism; and, yielding to trains of association, we recall the splendid fables which veil the origin of the history of nations. The precocity of the author's talents is also somewhat extraordinary; for, in his fifth year, he was a proficient at chess, and, ere he had completed his second lustre, he composed comedies for his amusement, enigmas for the *Mercure de France*, epigrams on the news of the day, and madrigals for the ladies. He was flattered, but not corrupted, by applause; he read with avidity the romances of the good old times; and, when he beat his tutor at chess, his tutor beat him for a faulty version.

Having furnished his mind with a laudable provision of romance, poetry, belles-lettres, history, and morality, our accomplished hero fell desperately in love with a school-master's daughter: but, being naturally of a very modest disposition, he did not venture to request his father's consent to the projected nuptials, till repeatedly urged by his mistress, and favoured by the darkness of the evening, when he received for answer a hearty slap on the face. Indignant at such treatment, he ran away from home, but had not proceeded far when his susceptible heart was again captivated by a young woman, somewhat simple, and very devout. Unfortunately, however, her prosing confessor laboured in vain to convert him from the protestant faith, and the negociation was abruptly terminated. Another adorable maid awaited him at Nantes: but an eager desire of visiting Paris, and witnessing the public rejoicings for the peace in 1748, getting the better of his rage for marriage, he posted away with a light heart, and a lighter purse, the pittance that remained with him not amounting to one fourth of the expence of the journey. This alarming deficiency in his finances was supplied by a merchant from Rheims, who was tired of riding, and to whom *Duchillon* resigned his place in the chaise, braving on horseback the rigour of the elements, till a furious snow-storm compelled him to take shelter under the jaded steed. They afterward continued their route in a public conveyance, in which they were duly regaled with many and long disputations concerning religious opinions. 'For my own part,' says the memorialist, 'young as I then was, I perceived from that moment the inutility of controversy on this subject; and I found that, when we arrived

rived at the barriers of Paris, each adhered to his first sentiments.'

Our *nouveau débarqué* was charmed with the Parisian society, and frequently resorted to the theatre, or mingled in a *coterie* of amiable and lettered friends. In three months he composed a tragedy on the return of Ulysses to Ithaca, and presented it to *La Noue*, the comedian, for his approbation. The reception of this piece was far from flattering: but its author consoled himself with the applause of a village clergyman, who had never read a tragedy in his life, and who was, moreover, a very good-natured and merry fellow. The god of love, meanwhile, was preparing for *Duchillon* a tragedy of deeper interest. The preliminaries of a matrimonial union with a miss at the boarding-school, destined to a large fortune, had scarcely been adjusted, when the young lady was taken home by her father. This cruel intelligence was received by the deserted swain in the presence of five or six girls, who had been bred at the same school; and therefore he could not, he says, do less than dash his head against the wall: but the damsels interposed their tender offices, prevented a repetition of the blow, honoured him with *all their compassion*, and admired him as the victim of an excessive attachment and grief, which they believed could have existed only in romance.

As our eagerness to recount these momentous incidents has withdrawn our attention from the vulgar consideration of hard cash, it may now be proper to mention, that a relation of his father supplied our adventurer with some of this useful commodity, on his arrival in the French capital: but, as this temporary source of accommodation was speedily exhausted, the bustle of Paris was hastily relinquished for the tranquillity of the paternal mansion. In this retreat the memorialist began seriously to meditate on some fixed plan of life, when the arbitrary confinement of his sister in a convent, by an order from the archbishop of the diocese, suddenly inspired him with the resolution of passing into England, and paying his respects to a wealthy uncle. On his way to Chatellerault, with the view of procuring letters from some English families, he was accompanied by the gay and frolicsome *Chevalier de la Borde*, who accosted every person whom he met in the style of the renowned Don Quixote. Having stopped to dine with a numerous marriage party at Montbason, they witnessed a ludicrous incident, which threatened to disturb the harmony of the feast. An officer having mentioned that the Baron de C— had lately taken his lady from a convent, in which he had confined her for three years on account of misconduct, a gentleman from Cahors first contradicted his statement of the facts, and then repeated

them nearly in the same language. 'Sir, I marvel at your audacity,' exclaimed the officer, 'thus to deny my assertions; were I near you, I would give you a blow, to teach you good manners; take it for granted that I have given it.' 'And I, Sir,' replied the Gascon, with all the coolness and gravity imaginable, 'to chastise your insolence, this moment run you through the body; take it for granted that you are a dead man.' The company, equally surprized and delighted with the repartee, easily prevailed on the parties to embrace and *keep the peace.*—In the evening, our travellers supped at St. Maure, and were entertained by the Baron and his lady; to whom *Duchillon*, by a most unfortunate mistake, related their own domestic history, as the news of the day.

No Englishmen were to be found at Chatellerault: but their absence was more than compensated by an accidental rencontre with Miss Betty Pitt, sister to the celebrated Lord Chatham, and her travelling companion, Miss Taylor. The former, if we can implicitly credit the author's insinuations, would have gladly detained him as a favoured guest; and with the latter, who was young, beautiful, and amiable, he was fated, as usual, to fall deeply in love. The fair one, too, according to custom, returned his flame: but even the society of these engaging ladies could not divert him from his purpose of hastening his departure for England. Miss Pitt, perceiving that all her entreaty was unavailing, at length ceased to urge delay, and gave him letters of introduction and recommendation to her brother and Lord Barrington. The former, then only paymaster-general of the forces, manifested every disposition to serve the young foreigner; when his sister unfortunately quarrelled with the *Dutens'* family, and all intercourse was abruptly broken off.

Thus disappointed in his hopes of preferment, *Duchillon* sought for consolation in the study of the English language, and in the society of Miss Taylor, who had returned to London, and continued faithful to her engagements. As soon as the author reckoned himself equal to the task of translation, he tried his skill on Congreve's *Way of the World* and Garrick's *Lying Valet:* but as the plan and spirit of the latter appeared to him to be completely French, he begged to know the real history of the piece from Mr. Garrick himself. Though distinctly assured that it had no connection whatever with any French performance, no sooner was it transmitted to the Parisian comedians, than they returned it as the *Souper mal Apprêté* of *Haute-Roche*, with a few trivial alterations, 'which,' adds the translator, 'I found to be really the case.'

After several unsuccessful efforts to procure an establishment, the subject of these memoirs was induced to return home, for the benefit of his health: but scarcely had he reached the end of his journey, when he was seized with a violent fever, which had nearly proved fatal. During his convalescence, he began to moralize on his condition, and adopted those principles of virtue and religion by which he professes to have regulated his future conduct. In the midst of his meditations, he received an invitation from his uncle to return to London, and accept an offer of travelling with a gentleman of fortune, who was *inconsolable* for the recent loss of a beloved partner. In a few days, however, he married another lady, and *Duchillon* was placed as governor in the house of a Mr. Wyche, with the consciousness of being thoroughly unqualified for the situation. Yet by perseverance and assiduity, he contrived to keep *a-head* of his pupil; and Mr. Wyche himself, an accomplished scholar, and a most worthy gentleman, very obligingly undertook to explain the Greek and Latin authors, and to form at once the master and his disciple. Under such auspices, the author passed a few years with much pleasure and improvement, and not only became endeared to the family, but widened his range of study, acquired habits of regular industry, and fitted himself for the active stations which he afterward occupied. The death of his favourite pupil is commemorated in language truly pathetic; and the reader will not peruse without emotion the account of Miss Wyche, who had the misfortune to be born deaf and dumb, and who was much indebted to the imported Mentor for the unremitting attention with which he laboured to instruct her. A mutual attachment, by no means equivocal on the part of the young lady, was the result; when the unexpected appointment of Secretary to the Hon. Stuart M'Kenzie, Envoy Extraordinary to the court of Turin, released the author from singular perplexities.

This change in *Duchillon*'s situation brings us to the second part of his memoirs, which, in fifteen chapters, deduces his history to the period of his introduction to the Duke of Northumberland.—The first movement of the embassy is thus described:

'We left London in the month of October, 1758. England being then at war with France, a great many young Englishmen availed themselves of Mr. M'Kenzie's permission to travel through France, and formed a considerable retinue. Our entry into Calais, after a violent squall, exhibited a very ludicrous contrast. The Prince of Croy, who commanded in Picardy, was then at Calais; and, desirous of shewing every mark of polite attention to the

English Minister, he took his station on the quay with part of the garrison, to hand Mylady out of the vessel. Unfortunately, we had been tossed all night on the water, and, supposing from the state of affairs, that we should slip into the town unperceived, none of us had ever thought of dressing. Behold, then, the Prince of Croy, with his hair frizzled and powdered at eight o'clock in the morning, and at the head of the officers of his garrison, gallantly giving his hand to Mylady, in her night cap; Mr. M'Kenzie following next, quite confounded at this unexpected reception, hanging down his head, wrapt in his cloak, with his hat over his night-cap, and accompanied by a dozen English gentlemen, pale and jaded, with their hair undressed, and one half of them with their stockings hanging about their heels. In this plight, we proceeded through the town, with drums beating and between two rows of soldiers, to the great amusement of some smart officers, who could not help remarking the contrast. The Prince took leave of Mylady at the door of the inn, to allow her time to repose, after having invited the party to dine with him: but Mr. M'Kenzie felt so much hurt at the ceremony of this reception, that, though he had intended to pass a day at Calais, he accelerated his departure; and, after having sent me to present his thanks and make his apology to the Prince of Croy, he abruptly quitted Calais, to avoid the dinner, ball, and play which the Prince had ordered for him.'

At this distance of time, and especially since the changes occasioned by the French Revolution, we contemplate the then political state of Europe with diminished concern; yet some of the author's sketches of eminent characters which came under his observation, during his official residence at Turin, are lively and entertaining. Several amusing anecdotes are related of the Marquis *de Breille* and the Comte *de Bogin*. The former, we are told, might be justly denominated 'the living history of half a century;' since few enjoyed more frequent or better opportunities of procuring information, and his memory was never known to fail.

'On one occasion, (says the author,) when the conversation turned on the avarice of the famous duke of Marlborough, and I mentioned that I could not believe what I had heard of him, namely, that during a private conference in the night, he had put out one of the wax candles in his room; "It is, nevertheless, a fact," said the Marquis, somewhat keenly, "for it happened in my presence. Prince Eugene sent me, in the evening, to apprize him of some dispositions preparatory to an attack on the following day. The people awakened his Grace, who had already gone to bed. I was shewn to his bedside, and a valet-de-chambre placed two wax candles on the night-table, and retired. Early in the conversation, which promised to be long, the Duke, without relaxing his attention, and without uttering a syllable, put the extinguisher on one of the lights, and continued to listen with the same degree of earnestness to the particulars which I was ordered to communicate."

Our

Our Secretary of Legation now contracted a tender attachment with Madame *Martin*, the young and blooming spouse of an opulent citizen: but religion restrained his passion within the bounds of virtue and decorum. During the absence of his principal, he was named *Chargé d'Affaires*, a character in which he more than once acquitted himself much to the satisfaction of the British Court. On the appointment, however, of a new minister to Turin, he returned to England, by the way of Paris, where he halted for some time, according to his instructions. In a party of English who had met at the Marquis of Tavistock's, in honour of the birth-day of their Sovereign, *Duchillon* happened to sit next to the celebrated Sterne; who described him in the most ludicrous point of view, without knowing that he was present, to the great diversion of the company. The portrait, it should seem, was greatly overcharged; and the *sentimental* satirist, when he was informed of the blunder, made a personal apology, which was accepted with much good humour.

In regard to the conclusion of the peace during Lord Bute's administration, the author furnishes us with some curious information:

'Lord Bute received the King's commands, and communicated them to his brother; Mr. M'Kenzie transmitted them to the Comte *de Viry*, the King of Sardinia's Minister, in whom they placed the greatest confidence; the Comte *de Viry* corresponded on the subject with the Bailli *de Solar* at Paris, who conferred with the Duc *de Choiseul*; and when they had agreed on an article, they passed it officially through Lord Egremont's department. With the view of obviating the more formidable difficulties, Lord Bute and the Duc *de Choiseul* entered into correspondence; and I was sometimes employed to translate into French a part of a letter, or a few sentences; for they did not communicate the whole to me: but I saw enough to guess the rest, without appearing to do so. When preliminaries were settled about the end of 1762, the Duke of Bedford was sent to Paris, and the Duc *de Nivernois* came to London, to sign them. It was on occasion of this arrival of the Duc *de Nivernois*, who was little and thin, that Mr. C. Townshend remarked, on seeing him, that they had sent the preliminaries of a man to sign the preliminaries of peace.'

Before Lord Bute retired from office, the author obtained a handsome pension; and shortly afterward, he was invited to resume his function of *Chargé d'Affaires* at Turin, a station to which he manifests an evident partiality. His friend the Marquis *de Breille*, in his eighty-first year, had now become enamoured of his favourite Madame *Martin*; and, which is not less extraordinary, this lady preferred the Marquis to more youthful admirers. The reader's attention is now again drawn

to the Comte *de Viry*; whose love of mystery is thus strongly depicted :

'He carried this spirit of reserve even into the interior of his household ; the most trifling message delivered to one of his domestics was a mystery to all the others; and if he happened to be indisposed, it was a state secret. He one day called a surgeon, to dress an ulcer on his leg ; and when a similar sore broke out on the other, he sent for a different surgeon, that the disordered state of both limbs might not be known : —a circumstance which was the cause of his death.— To a person who inquired for him, his secretary said, "He is dead, but he does not wish it to be known."

Among the numerous strangers of distinction who passed through Turin, on their way to or from Rome, particular mention is made of the Duc *de Crillon ;* who related a singular anecdote of the Duke of Ormond and a German Baron, who were both considered as models of politeness. When the Duke perceived that he was dying, he desired that he might be seated in his elbow chair, and then, turning to the Baron, he requested that he would excuse any unseemly contorsions of feature, as his physician assured him that he must soon struggle with the last pangs. 'My Lord Duke,' replied the Baron, 'I beg you will be on no ceremony on my account.'

The circumstances of *Duchillon*'s connection with the Northumberland family, and of his travels with Lord Algernon Percy, are the theme of fourteen chapters, which compose the third part, and bring us to the second volume. This portion of the narrative, though not devoid of interest, presents us with little that is original, or particularly striking. The most prominent passages, perhaps, are those which relate to the courts of Vienna and Berlin.

A temporary residence at Spa, Paris, Chanteloup, and a hurried excursion to Italy, form the subjects of remark in the fourth part. With the exception, however, of an enchanting picture of the Duke and Duchess *de Choiseul*, and of the style of their society in the country,—a subject which is resumed in the sequel,—we perceive little that is worthy of abridgment or transcription. Yet the particulars attending the death of the Dutchess of Northumberland are too extraordinary to be passed in silence :

'Three months after this period, the Duchess of Northumberland died when we least expected it. I had passed the day with her, when she entertained company, and was, as usual, very cheerful and very amusing. I waited on her next morning, and on taking leave, she made me promise to pass the evening with her. Accordingly, I agreed to return at nine o'clock. At seven, she sent a servant to request my immediate attendance. I ran instantly to her house, somewhat alarmed at the urgency of the message. Immediately on my

my arrival, she desired that I would be seated, and thus addressed me: "I feel indisposed; I believe that I shall not live long; and I was afraid I might lose my recollection, before I had taken leave of you, and intrusted you with a particular commission." Astonished at this language, I said all that I could to banish such an idea from her mind, but nothing could shake her firm persuasion. "It has been foretold to me," said she, "that I shall not pass sixty-years—a term which expires on Thursday. The prediction, I perceive, is on the eve of accomplishment—so let us not lose time in vain reasoning." She then explained the particulars which she intrusted to my confidence, and took leave of me, as for the last time. As I could not believe, however, that she was really so near her end, I expressed the less regret. I saw her next day: but she was in such a state, that she could hardly recognize a single individual. In a short interval of recollection, she fixed her eyes on me, and said "Adieu, for ever." On Thursday evening, she asked what the hour was, and was answered, six; "I have, then, still two hours to live," said she, "for I was born at eight;" and in fact she expired about eight o'clock, having just completed her sixtieth year.'

In the fifth and last part, which contains twenty-nine chapters, the author traces his history from his engagement with Lord Mountstuart, who was appointed envoy at Turin, to the death of his friend and patron, Mr. M'Kenzie. When the embassy halted at Paris, the memorialist collected some important notices relative to the much agitated subject of the *Iron Mask;* which render it extremely probable, that the person confined was minister to the Duke of Mantua, and employed in soliciting all the courts of Italy to form a league against their common enemy. Several pages are devoted to another ramble over Italy: but Chanteloup is still the centre of the reader's attraction. From the many interesting passages suggested by the conversation which took place at this delightful spot, we select the following, which is reported on the authority of the Abbé *Barthélémy:*

'When the celebrated *Abbé Prévôt* supped one evening with some friends, he advanced a paradox which excited their indignation. He insisted on defending, and his friends on combating his opinion. He maintained that, if every body would sit in strict judgment on himself, few would be found undeserving of the gallows. To begin, then, with yourself, said his friends, What have you done to incur such a punishment? We have all known you from childhood; and though we allow that you were always thoughtless, and even a little free in your manner of living, none of us can recollect a single act which could subject you to death.—Because you are not acquainted with all my history, replied he. Listen for a moment—I confide in your secresy—and my present confession to such intimate friends can be attended with no bad consequences. What will you say, if I now declare that I killed my father?—As if, forsooth, exclaimed one

of

of the company, it was not generally known that your father died in consequence of a fall on the stair-case.—That is true, continued the Abbé, but it was I who pushed him. The fact is, I was attached to a young girl, daughter of a neighbour, who lived in the house adjoining to ours, and I wished to marry her. My father not only refused his consent, but absolutely forbade me to see her. As I paid no regard to this prohibition, and my favourite's father would not admit me into his house, we had contrived to see each other and converse on the roofs, and I introduced her into our garret. My father perceived it, and came on us by surprize. Though a worthy man, he was subject to violent fits of passion: he not only heaped reproaches on me and this poor girl, but was even going to beat her, when I stepped before him, and, in the struggle to prevent his approach, I pushed him towards the stairs. His foot slipped on the first step, he fell backwards, and was deprived of his senses by a dangerous wound on the head. I raised him up, called for assistance, and put him to bed. On recovering his recollection, he was sensible of my grief, and of my assiduities; and I continued by his pillow as long as he survived this accident. His extreme kindness for me induced him to conceal from his friends the true cause of his death, and thus only aggravated my sorrow and remorse.

'This man, who reproached himself with deserving capital punishment, was fated to a still more shocking end. When walking in the Bois de Boulogne, he fell down, apparently dead, in a fit of apoplexy, at the foot of a tree. Some peasants, who found him in this condition, conveyed him to the house of a surgeon, who ordered a judicial examination. He was pronounced to be dead; and the surgeon was authorized to open the body. On the first incision, the unfortunate man uttered a horrible shriek: but the mortal blow was given, and he opened his eyes only to behold the dreadful manner in which he was deprived of existence.'

Towards the conclusion of the second volume, we are introduced to a captivating groupe of the Corps Diplomatique and other persons of distinction who visited at Petersham, the seat of Mr. M'Kenzie; and we are not sorry to learn that this gentleman bequeathed a third of his property to the author of the present memoirs.

Our discerning readers will probably conclude that M. Dutens evinces considerable address and perseverance in the prosecution of his worldly schemes; yet several instances might be quoted of a sacrifice of patronage, or emolument, to views of comfort and honourable conduct. We cannot, however, dissemble that his assiduities with the great, and his loud and repeated encomiums on their virtues, are but rarely blended with feeble murmurs at the vanities of birth and fortune, and unmeaning sighs for retirement and independence, both of which were in his power, if he chose to realize them. We likewise perceive an evident inclination to attach blame

to a few of the grandees, who forgot to repay his services with an overflowing measure of friendship or of gratitude. On more occasions than one, he celebrates his very delicate observance of truth and honesty: but he leaves us to reconcile, as we best can, this rare qualification of a diplomatic agent with concealing official information from his principal merely to increase his own consequence; with his easy relinquishment of tender engagements; and with his anxiety to procure a surreptitious copy of the public accounts at Turin. Indeed, with respect to the *purity* of this last transaction, he is willing to take shame to himself; and we are only surprized that he could place any reliance on the *accuracy* of documents obtained through the agency of a notorious swindler and a treacherous valet-de-chambre. As the professed friend of christianity, M. DUTENS occasionally inveighs against the French philosophers, and is particularly displeased with *Condorcet*, who had ventured to attack one of his minor publications: but his religious impressions were never sufficiently powerful to limit his exertions to the cure of souls; and when he dreams of retirement, the banks of the Arno seem to have more attraction than a rectory in the north of England.* Yet, after every reasonable abatement, his recitals will not be perused without concern or without profit by those who study the human character in all its variety of aspects and bearings: nor can we sufficiently applaud that forbearance which has induced him to suppress a considerable portion of his written records, from respect to the feelings of the living and the memory of the departed.

Dutensiana, the title of the third volume, sufficiently explains its import. It is, in fact, a collection of detached and very incongruous materials, from which a few witty and entertaining pages might be compiled. The theological and metaphysical observations, and some of the historical remarks, we conceive to be too grave and hackneyed for a medley of this description; a few of the anecdotes and bon mots were already in circulation, and a few more are repeated from the memoirs.

On the whole, when we reflect that M. DUTENS has studied and seen so much, we are somewhat disappointed at the meagerness of this supplementary part.—A neat and judicious selection from the numerous volumes of *Anas* is still wanting, and would well reward the trouble of publication.

A translation of these memoirs has been advertized. **Muir.**

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* M. DUTENS is rector of Elsdon in Northumberland.

ART. VIII. *Dictionnaire des Sciences Naturelles*, &c. *i. e.* A Dictionary of the Natural Sciences, &c. Vols. IV. & V.* 8vo. Paris. 1805 and 1806. Imported by De Boffe. Price 18s. Sewed.

THESE volumes bring down the work only to the letter C.; and yet we have still to notice the extreme brevity of a great many of the articles, and the scanty or superficial explanations of others. In *Bomare*'s Dictionary, and those of his successors, we perceive a feeble and useless display of terms purely foreign; the legitimacy of whose admission would justify that of thousands of the same complexion, and thus multiply the vocabulary of natural history a hundred fold. We can see no good reason for swelling and deforming any portion of French lexicography, with the random insertion of names appropriate to the language of Malabar, the Brazils, or Nova Zembla; especially when the exclusion of such outlandish designations would leave room for a more complete series of the domestic and scientific phraseology. The contributors to the present undertaking, instead of banishing this extraneous jargon, rather manifest a disposition to extend it beyond the example of preceding compilers. Why inform us that *Bebe*, in the Malay language, signifies a duck; that *Ben-tsjapo* of the Bramins corresponds to *Kæmpferia rotunda*, or Zedoary; that *Bog finke* is the Norwegian for brambling; and *Beschenaja-ryba* the Russian for *Shad*; unless it be intended to register the synonymy of every known language, so far as it regards the natural sciences. *Bream*, *birch-tree*, *button-tree*, &c. are explained as mere English words: but why should they be preferred to *bee*, *beetle*, *bittern*, and hundreds of others? A polyglot vocabulary of natural history might be extremely useful: but its completion would require a very extended association of talents, minute subdivisions of labour, and many years of travel, of diligence, and of perseverance. The present feeble attempts we regard as altogether nugatory, and foreign to the plan of the publication.

The insertion of the French provincial appellations, on the contrary, perfectly coincides with the nature of the work, and considerably enhances its value. We have only to regret that the list is far from complete, and chiefly limited to the popular dialects of Languedoc and Provence. For other and more important omissions, we are quite at a loss to account, because the Parisian libraries could have very easily supplied them. We subjoin a few which have occurred to our recollection in turning over the fourth volume.

* See Appendix to M. R. Vol. xlvi. p. 465. and Vol. xlviii. p. 486.

Banille,

Banille, S. *Vanille.*—*Baradas*, a pink of a beautiful reddish brown colour.—*Barbue*, the bearded tit-mouse—field fennel-flower.—*Baret*, the cry of the elephant, or of the rhinoceros.—*Bargache*, the gad-fly.—*Barreur*, a dog expert in chasing the roebuck.—*Bassioglosse*, the abductor muscle of the tongue.—*Bassile*, S. *Bacile.*—*Bassin*, the disk of a flower.—*Bangue*, sea carex.—*Bayard*, a bay horse.—*Bayon*, a small bay, or inlet.—*Becque*, a buck, or goat.—*Becune*, the large African sea-pike.—*Bedellion*, S. *Bdellium.*—*Begasse*, sugar-cane that has undergone pressure.—*Begu*, a various coloured beak, a horse that marks regularly with his fore-teeth, from the age of five years.—*Berbe*, the Senegal martin.—*Bergerette*, the gray wagtail.—*Berlin*, the acorn shell.—*Bezier*, the wild pear-tree.—*Biari*, the spermaceti whale.—*Bicapsulaire*, that has two capsules or cases.—*Bifide*, bifid, cleft in two.—*Bifre*, S. *Bièvre.*—*Bigaille*, a dipterous or two-winged insect.—*Biloculaire*, that has two small compartments, or cells.—*Bimauve*, S. *Guimauve.*—*Binne*, S. *Pinne-Bitumination*, conversion into bitumen, or the substance so converted.—*Bivasiculaire*, that has two vessels.

A careful collation with other dictionaries and books of science would probably lead to the detection of many more omissions, which readily elude the memory, especially on English ground. When we add that too many of the descriptions are dismissed with dry and uninteresting brevity, we have stated every circumstance that we conceive to be objectionable in the compilement of these volumes.—We shall now point to some of the more prominent articles.

Bananier contains most of the important particulars relative to the history of the plantain-tree, and its esculent fruit. The latter is recommended as capable of furnishing a very wholesome and nutritious bread, without the addition of flour; and this species of food is peculiarly suited to the negroes, especially to such of them as have been recently imported.

The article *Bantiale*, so imperfectly described by *Rumphius*, suggests some pertinent reflections on the modification of plants occasioned by insects. The bulb, when gnawed by a species of ant, attains, by the extravasation of the sap, to a prodigious size, which the insects pierce in all directions, and form into a retreat that is not violated with impunity. This is no solitary instance of the accommodation afforded by the vegetable to the animal tribes. Of the same description are a great variety of gall-nuts, produced by the puncture of numerous species of cynips and other insects, and which affect the forms of regularly shaped fruits. The caprification of the fig-tree reveals a mystery still more remarkable. The

mimosa cornigera has its specific designation from a hollow protuberance, which furnishes a lodgment to a particular kind of ant that cannot easily endure to be molested in its habitation. 'The English, in their account of the settlement at New Holland, make mention of a shrub, the interior of whose branches is inhabited by ants, after they have devoured the pith, without any apparent injury to the plant. It is astonishing to see, on the breaking of every branch, a close column of these creatures issue forth, and manifest their resentment by their stings and bites, which are equally painful. *Du Petit Thouars* has observed precisely the same thing with respect to a shrub indigenous to Madagascar, and nearly allied to the genus *Menispermium*. He intends to describe it, with other curious plants which he has collected in that island.'

Barbu, which comprizes the *Bucco* genus of birds, is well detailed, and chiefly extracted from *Le Vaillant*'s large and expensive work.

Under *Bardane* (Burdock), it is mentioned that M. *Dambourney* has obtained an excellent alkali by the incineration of the green leaves and stalks; three pounds of ashes yielding one of alkali. He therefore proposes to have the plant cultivated on account of this valuable produce. As it affects waste and stony places, is very hardy, and not liable to be devoured by cattle, it might be raised with very little trouble or expence.

The article *Barille* contains some judicious observations on the mode of cultivating the plants which produce barilla, and arguments in favour of introducing the Spanish practice into the south of France.

Baryte, *Basalte*, *Bec*, and *Bec-Croisé*, are discussed with ability, and at considerable length. *Becasse* likewise forms an excellent article, in which we find the following comment on a passage in *Buffon*'s history of birds. According to that naturalist, wood-cocks arrive one by one, or in pairs, and never in flocks. '*Magné de Marolles* combats this assertion by positive facts. He has had in his hand one of these birds that was killed in the country when flying in the company of fifty or sixty others; and he mentions several fowlers who have shot a dozen woodcocks in the direction of a thick hedge, or in a small wood, in the course of a single morning or evening; and who have occasionally met, at the commencement of their arrival, with troops of forty, fifty, or even eighty, in a confined district, where none were visible next day. It would, indeed, be difficult to account for such an assemblage of wood-cocks, if they arrived only singly, or in pairs.'

Among the medical uses of *atropa belladonna* (deadly nightshade), notice is very properly taken of the ingenious expedient of

of Dr. *Rimærus*, professor of medicine at *Hamburg*. Having remarked that the extract of this plant, dissolved in water, and applied to the eye, produced a sudden paralysis of that organ, attended with an extraordinary dilation of the pupil, he successfully avails himself of the circumstance in preparing for the operation of eouching.

The most satisfactory articles in the fifth volume are, *Bois*, *Bombyce*, *Botanique*, *Branche*, *Buse*, and *Busard*.

According to the arrangement of Weber and Fabricius, the compilers have separated the *Brachyni* from the Linnéan *Carabi*; though, perhaps, with more regard to innovation than improvement. The two species which are particularized are the *Crepitans* and *Sclopeta*, both remarkable for a very singular property.

'When the insect is seized, or thinks that it is in danger of being taken, it emits a crackling sound, and a whitish or yellowish vapour of an acid odour, from under its wing cases. This little phænomenon, produced from the salutary alarm of a single insect, frequently determines all the puny members of the same family to repeat the manœuvre. Then all the crevices of the stones and earth, in which they take up their abode, appear like so many smoaking volcanos in miniature. Such are the defensive weapons of these brachyni. Perhaps they employ them to kill or stun the other small creatures on which they subsist: but observation has not yet ascertained the fact.

'Prompted by a very reasonable curiosity, we have endeavoured to inquire into the nature of this vapour. It is a real acid, which some experiments have demonstrated to be of a peculiar kind, and secreted in the interior of the body. On carefully opening the abdomen, we have found it in a liquid form, contained in two transparent and muscular vesicles. These last, after having united in a single duct, terminate at the anus in a sort of vent. Instantly on these little reservoirs being opened, the contained liquor begins to effervesce; and no sooner does it come into contact with the atmosphere, than, bubbling like ether in a vacuum, it instantly evaporates. Such is the energy of this acid, that it communicates first a red and afterward a yellow hue to paper stained with blue vegetable colours. If the entire vesicle be applied to the tongue, it produces no sensation: but if it gives way, it diffuses in the mouth a peculiar and rather pleasing savour, and excites on the part to which it is applied a smart pain, proceeding from its causticity; leaving, at the same time, a yellow spot exactly similar to that which is produced by a drop of nitric acid.

'What, then, is this singular acid? Inclosed in living animal parts, it does not destroy them. Does it not exist there in some particular state of combination? or is it converted into acid only by the contact of a gas with the oxygen of the atmosphere? These are queries which we have not been able to solve, but which certainly deserve the attention of the naturalist and of the chemist.'

Carabus

Carabus crepitans, if we rightly recollect, is noted by Marsham as a native of England. Fabricius alludes to a diminutive variety which occurs in Germany; and a very large species, call the *Smoaking*, is found in America. Some exotic species of this genus have been lately discovered to possess the same exploding power in a higher degree.

For a valuable account of *Breccia*, we may also refer to *Brechè* in the present volume: but we must remark that the agglutinating property of iron, in forming the paste, has been too much overlooked.

To the list of botanical writers in this dictionary, we have now to add the name of M. *Aubert du Petit Thouars*, which was omitted through inadvertence in the former volumes.

Muir.

ART. IX. *Tableau Methodique*, &c. *i.e.* A systematic View of Mineral Substances, exhibiting the complete Series of their Characters, and the Nomenclature of their Varieties, extracted from M. *Haüy's* Treatise on Mineralogy, and enlarged by new Discoveries; to which are subjoined the Indication of the Geological Position of each Species, and the abridged Description of the Collection of Minerals belonging to the Museum of Natural History. By I. A. H. LUCAS, Joint Keeper, with his Father, of the Galleries of the Museum of Natural History, and Agent of the National Institute. Part First. Printed with the Approbation of the Administrative Assembly of the Professors of the Museum of Natural History. 8vo. pp. 410. Paris. 1806. Imported by de Boffe. Price 9s. sewed.

THOUGH somewhat pretending, this title promises no more than is performed. The author's predilection for the study of mineralogy, the opportunities of his professional situation, and the assistance and approbation of the most eminent judges, have enabled him to execute a neat, succinct, and comprehensive abstract of the Haüyan method of arranging and discriminating mineral substances. As the mere abstract, however, of an elementary book of science, can afford little scope for critical remark, or interesting quotation, we shall be contented to notice it in general terms, and to accompany our report by a particular extract.

The most important parts of the work are, a table of the physical, geometrical, and chemical characters to which M. *Haüy* has had recourse,—his names of the constituent principles of minerals,—his ingenious distribution of the latter into classes, orders, genera, and species,—the appropriate characters of each species,—and the various forms, determinable, or indeterminable, of which it is susceptible. Although this

synoptical

synoptical exposition was printed three years ago, yet, as different circumstances conspired to retard its publication, the author has annexed, under the title of *Additions and Corrections*, the more recent observations and discoveries of M. *Haüy*, and other eminent chemists and mineralogists. A table is subjoined of the crystalline forms of the mineral species, extracted from the original treatise, and corrected and enlarged, according to the present improved state of mineralogy. This, again, is followed by two alphabetical lists, the first of which refers the minerals described to their respective places in the publication, and the second to their stations in the repositories of the museum. Thus the volume will prove of singular benefit as a manual to those students who have access to that valuable collection. We may add that it is handsomely printed, on a small type, ornamented with a head of professor *Haüy*, and illustrated by a commodious plate of the primitive forms of the several mineral species.

With the double intention of exemplifying the character of this performance, and of conveying information which may be new even to some of our mineralogical readers, we copy the article *Topaz*, both as it stands in the View and in the Additions:

' VI. Species.	' Varieties.
Topaz.	Forms.
(Treatise, t. II. p. 504.)	*Determinable.*
Characters.	1—Dioctaedral.
Essential Charact.	2—Subtractive.
Double refraction; joints very sensible, perpendicular only to the axis of the crystal.	3—Monostic.
	4—Subdouble.
	5—Distic.
Physical Charact.	6—Dissimilar.
Specif. grav. 3,5311 . . . 3,564.	*Indeterminable.*
Hardness. Scratches quartz, and is scratched by spinell.	7—Cylindroidal.
	8—Rolled.
Refraction, double.	Accidents of Light,
Electricity; vitreous on one side, and resinous on the other, by heat, in those that are called *Brazilian* and *Siberian* topazes.	*Colours.*
	1—Limpid.
	2—Yellow.
	3—Pale-yellow.
Geometrical Charact.	4—Rufous yellow.
Primitive Form. A prism, whose sides are rectangles, and bases rhombs, having their greatest angles 124° 22′.	5—Saffron-yellow.
	6—Reddish yellow.
	7—Greenish yellow.
(Fig. 36. p. XLIV.)	8—Greenish blue.
Integral molecule, id.	9—Red.
Fracture, longitudinal, conchoidal, and shining.	10—Milky.
	Transparency.
	1—Transparent.

CHEMICAL CHARACT.
Infusible before the blow-pipe.
Analysis of the Saxon topaz, by Vauquelin.

Silica .	31
Alumina .	68
Loss	1
	100

2—Translucent.
3—Opake.'

The same substance is thus treated in the Additions:

'A SOLITARY SPECIES. ALUMINOUS FLUAT OF SILICA.

CHARACTERS.

(See for the characters of this species, the article TOPAZ, in the preceding View.)

Primitive Form. Treatise, fig. 36. pl. XLIV. or View, fig. 5.

Analysis of the Saxon Topaz.

(*Vauquelin*, Journal des Mines, tom. xvi. p. 469, et seq.)

Silica .	30
Alumina .	50
Fluoric Acid	18 to 20
	100

"If the fluoric acid," says M. *Vauquelin*, "be one of the essential principles of the Topaz, as M. *Klaproth* has reported to our colleague, M. *Haüy*, I might expect to recognize its presence in the other varieties of this species, since those of Siberia and Brazil have the same primitive form; and experience has confirmed the conjecture. Hence,' continues the same profound chemist, 'we must, in future, regard the topazes as kinds of saline matters, agreeably to the definition which has been given of those matters; and doubtless we shall not contemplate, without a certain degree of surprize, a combination so charged with fluoric acid, present such a high degree of hardness and infusibility: especially when we reflect that all the other known combinations of the fluoric acid are so soft and so fusible." Pag. 473 of the Memoir.

'VARIETIES OF FORMS.

(*Haüy*, *Annales d' Hist. Nat.* tom. I. pag. 346 to 352, and pl. XXIII. fig. 2 and 4.)

'*Octosexdecimal* aluminous fluat of Silica; *Annales*, p. 348 and fig. 2.

'The prism of the dioctaedral variety, with eight sides (Treatise, tom. II, p. 507, & fig. 37, pl. XLIV.) with two pyramidal summits, of which one has six faces, and the other has ten.

'*Perioctaedral* aluminous fluat of Silica, *with a Sexdecimal summit*; *Annales*, p. 352, & fig. 4.

'Formed, as its name imports, of an eight sided prism, terminated only on one side by sixteen faces, of which the twelve that are ternate correspond to the borders of the base of the nucleus, and the other four, which are solitary, correspond to its angles.

'The examination of Topaz crystals, including both these new varieties of form, has conducted M. *Haüy* to two interesting results. The first variety has enabled him to verify a conjecture, which his observations on the electricity of several other mineral substances, and particularly of tourmalin and the borat of magnesia, rendered extremely plausible, and which nature seems to take a pleasure in confirming, namely, that the secondary forms of such minerals as are capable of becoming electrical by heat, always deviate from the rules of symmetry, at the same time that the two summits always acquire two opposite states of electricity. The second variety has presented him with a new electrical phænomenon, which seems to be very nearly allied to that which is exhibited by magnets with consecutive points. "It is," says he, "an additional instance of resemblance between the appearances produced by magnetism, and those which are especially exhibited by bodies susceptible of electricity by heat; and in which the law of the electrical densities is so completely analogous to that observed by the magnetic densities in the artificial loadstone." Page 351.

'The same memoir contains the description and figure of an apparatus for the examination of *pyroelectrical* minerals, and which he now uses as the improved substitute of the former.'

In the event of a second impression, we hope that M. Lucas will incorporate the supplementary annotations in the body of the work, and fill his blank paper with regular references to the authors who have most successfully treated of each species.

The second part, which is not yet ready for the press, will embrace the general history of the mineral species, descriptions of the most remarkable specimens in the Parisian collection, and the synonymy of the vernacular and German nomenclature. With a view to this continuation, the engineers and pupils attached to the Board of Mines have already furnished the author with interesting notices of the districts which they have visited in their professional excursions; and with these M. Lucas will occasionally mingle the results of his own observations in different parts of the *empire*, particularly in the departments of Puy-de-Dome and Cantal.

Muir.

ART. X. *Madame de Maintenon*, &c. *i. e.* Madame *de Maintenon*, intended as a Supplement to the Histoty of the Duchesse *de la Valière*, by Madame DE GENLIS. 2 vols. 12mo. 8s. sewed. Deboffe, London. 1806.

WE formerly stated our unreserved sentiments relative to the merits of the performance of which this professes to be the sequel.* Regard to unity may now be supposed to justify an adherence to the original design: yet we cannot help expressing our regret that a writer, who possesses so many attractive qualifications, should invest truths comparatively recent with an air of fiction, or wantonly fashion a rich collection of authentic materials into the very questionable shape of an *historical romance*. The Travels of Cyrus, and the Adventures of Telemachus. chiefly please us because history is silent with regard to the *details* of the life and conduct of their respective heroes, and thus leaves much for fancy, aided by correct taste and judgment, to supply. Had the sons of Cambyses and of Ulysses been contemporaneous with Lewis XIV., and had their public and private transactions been as minutely recorded as those of the *Grand Monarque*, the good sense of Ramsay and of Fenelon would have selected other names for the subjects of their elegant and engaging fictions. Madame DE GENLIS indeed, contends for the veracity of all the leading incidents related in this free historical essay, for the genuine perfection of her principal character, and for the charge of improbability which would have attached to the display of such unsullied excellence in an avowed romance. She is, moreover, careful in almost every page to cite her authority; which, however, for the most part, is no other than the vague epithet *historical*. Her own reflections are neither numerous nor particularly brilliant: but the pleasing and lively manner in which she conducts her narrative, and her general observance of acknowleged facts, sufficiently convince us that she is, in all respects, qualified to draw from the existing and scattered records a connected, faithful, and interesting account of one of the most remarkable of her sex. Madame *de Maintenon* may be more safely proposed as a model for imitation than her frail predecessor in royal favour; and, on this account, her story deserves to be unfolded in its genuine circumstances, and in language that cannot be suspected. The very mention of *romance* creates distrust; and that which is neither romance nor history, but a compound of both, especially when it relates to matters of pub-

* See Monthly Review, Vol. XLV. N. S. p. 211.

lic

tic notoriety, appears to us to be essentially defective in its first formation.

Readers may be found, however, who are in some measure strangers to the subject of these memoirs; and there may be others, who can so far divest themselves of preconceived notions and acquired information, as to peruse them with an exclusive regard to their own merits, as forming a piece of agreeable writing. To such we may recommend them, under entire conviction that they will create neither satiety nor disappointment.—Instead of attempting to epitomize their contents, which would strip them at once of their native attractions, we shall transcribe two passages from Madame *de Maintenon*'s own diary of the occurrences of her early life :

'I was born in the prison of the Conciergerie of Niort, in Poitou. My mother voluntarily shared my father's confinement, that she might take care of him; and she suckled me, that she might have me under her own eye. My cradle, thus set down in the abode of sorrow, was bedewed with tears. At my birth, no friends or relations waited with their felicitations on the author of my existence: while to maternal tenderness I could be only a new load of cares for the present, and an additional source of anxiety for the future.

'Soon after my father procured his enlargement, he departed for Martinique. I was then only four years of age. Being taken ill on the passage, I was given up for dead, and was on the point of being thrown into the sea. The fatal plank, to which I was to be attached for this purpose, was already prepared, and the cannon was already charged, when my mother, in despair, determined to give me a last embrace. As she held me in her arms, and put her hand to my heart, she felt a slight degree of palpitation! – Thus was I indebted to her, a second time, for my existence.—We were afterward chased for a great way by an English privateer, which we had scarcely escaped, when we were assailed by a violent tempest. At length, however, we got rid of all these perils, and fortunately arrived at Martinique. The establishments which my father formed on this island were, at first, prosperous. He purchased a plantation, and many slaves. One morning, as I was left alone on the sea-shore, I narrowly escaped being devoured by a hideous serpent*. In the course of my subsequent reflections on these extraordinary particulars of my life, I have often thought that they seemed to presage no common destiny, and that they would make a distinguished figure in the history of some celebrated personage; whereas I am quite sensible that, in my obscure and homely condition, they can be interesting only to myself.'

Let us next introduce our readers to M. *Scaron*'s evening parties.

'M. *Scaron* shewed me so much friendship, that he gained my entire confidence; and I had no pleasure except at his house, where I

'* All these details are historical.'

met with society composed of the most amiable persons both of the city and of the court. *Ninon l'Enclos*, who joins to exquisite beauty the charms of talents and the graces of genius; the brilliant Marquise *de la Sablière*, who has inspired more pretty verses than any woman in the world, since she was at once the muse of her husband, of *la Fare*, her lover, and of *la Fontaine*, her friend; (all her ties were poetical: a madrigal of *la Sabliere* decided her marriage, the stanzas of *la Fare* turned her head, a fable from *la Fontaine* obtained her friendship; nothing but charming verses could entertain, seduce, and attach her;) Madame *de Coulange*, whose character is full of indulgence and gentleness, and whose wit never produced any thing but epigrams; *Coulange* and *Marigny*, who have celebrated their pleasures and their friendship in so many pretty songs; *Montreuil*, and *Charleval*, ingenious poets, rich in delicacy and grace; *Henault*, the translator of Lucretius; the learned *Menage*; the eloquent *Pelisson*, whom friendship exalted, and whose character and talents were alike honourable to letters; Mademoiselle *de Scudery*, who unites the most romantic fancy with the soundest judgment; the rural *Des Ivetaux*, who, that he might better celebrate the pastoral life and the groves, acted the part of a shepherd all summer, and composed his eclogues as he tended his flocks on the plain; the Comtesse *de la Suze*, sportive in her conduct, and plaintive in her poetry; Madame *de Sévigné*, who, on the contrary, reserved, prudent, and circumspect in all her actions, was so lively and so natural in her letters and in society; the abbé *Têtu*, a passionate lover of verses, celebrated for his impromptus, and who, though exclusively attached to female society, preserved the most irreproachable manners, desiring and receiving all confidential communications, indulgent from curiosity, never giving any other than good advice, but excusing every thing, provided that nothing was concealed from him; the beautiful Duchesse *de Lesdiguières*; *Vivonne**, celebrated for the smartness of his repartees; *Matha*, who tells a story with such naiveté and grace, and whose *bons mots* are so frequently quoted; the Comte *de Grammont*, his friend †, so noted for the adventures of his early youth; *Hamilton*, who manifested in his conversation all the gravity of his country, and in his writings all the levity of the French; *Turenne*, so renowned by his talents, his exploits, his virtues, and so amiable by the gentleness and simplicity of his character; the brave *Coligny*, who acquired so much glory in Hungary; *Villarceaux*, who long fixed the wavering *Ninon*:—Such was the society of M. *Scaron*.'

We can easily believe that such society possessed peculiar attractions: but Madame DE GENLIS' heroine would have approached nearer to *our* ideas of a perfect character, if she had moved in purer circles, and bestowed her affections on some more deserving object than either a licentious abbé, or *the greatest* of the Bourbons.

Muir.

'* The brother of Madame *de Montespan*.'

'† The Chevalier *de Grammont*.'

ART.

Art. XI. M. La Grange *on the Calculus of Functions.*

[*Art. concluded from the last Appendix.*]

In the preceding chapters of this work, its learned author had laid down the theory of the functions of one variable quantity only. The nineteenth chapter, which now calls for our attention, contains the theory of the functions of two or of more variable quantities; which, with regard to its principle and the process of developing it, does not differ from the former. Both are made to rest on the developement and derivation of functions: in one case we expand fx, increasing x by i or Δx, in the other $f(x, y)$ or $f(x, y, z)$, increasing x, y, z, by Δx, Δy, Δz, these quantities being totally independent of each other.

M. La Grange justly observes that, had the inventors of the differential calculus placed that calculus on another foundation, (the derivation of the functions of quantities,) half a century could not have intervened between its invention and that of the calculus of partial differences. This latter, too, would then have been regarded as an extension of the former, not as a new calculus, which it certainly was; as any person may be convinced who will read an *éloge* on *D'Alembert*, or the papers in the Paris Memoirs which succeeded the time of the invention of that mathematician.

For the explanation of this theory, M. La Grange follows the plan and the notation adopted by him in his *Fonctions Analytiques*. In order to expand $f(x+i, y+o)$, he first expands $f(x+i, y)$ into a series arranged according to the powers of i, and then he farther expands the resulting series by putting $y+o$ for y. This is sufficiently easy and obvious, but the notation is rather perplexing. Let $u=f(x, y)$, u is a function of x, y, and $\frac{u}{y^{\cdot}x^{\cdot}}$ signifies, in English notation, (we believe that Dr. Waring, in his *Meditationes Analyticæ*, has used a notation with like import,) the fluxionary coefficient of the second fluxion, the fluxion being taken first relatively to x and then to y; for instance, if $u=x^2y^3$

$$\frac{u^{\cdot}}{x^{\cdot}} = 2xy^3, \quad \frac{u^{\cdot\cdot}}{x^{\cdot}y^{\cdot}} = 2.3.x.y^2$$

M. La Grange denotes $\frac{u^{\cdot\cdot}}{x^{\cdot}y^{\cdot}}$ thus $f''^{\prime}(x, y)$

$\frac{u}{x\,y^{\cdot 2}}$ thus $f^{\prime,\prime\prime}(x, y)$ and so on.

A principal

A principal point in this theory is that the order of performing the fluxionary operation may be varied at pleasure:

$$\text{thus } \frac{\dddot{u}}{x\cdot y^{\cdot 2}} = \frac{\dddot{u}}{y^{\cdot 2}x\cdot} = \frac{\dddot{u}}{yxy^{\cdot}}$$

We find a great portion of the matter of this chapter in Art. 85 of *Fonctions Analytiques*.

In the succeeding chapter, is given the theory of the derived equations when several variable quantities are concerned; and the author delivers general methods for finding the integral equations of the first order.

The *Criteria Integrabilitatis*, or equations of condition, by which it is ascertained whether a fluxionary equation is derived from an integral equation, form the objects of the next chapter. On this subject, which is of considerable importance and difficulty, much has been done by *Euler* and by *Condorcet*; and these two mathematicians, we believe, first laid down those general and elegant formulæ, which express the characters of exact *derived* or fluxionary equations. These formulæ are obtained principally by the aid of this known and simple process in the fluxionary calculus:

$$x\dot{y} = (xy)^{\cdot} - y\dot{x}$$

Suppose z to be a function of x, y, z, $\dot{x}$, $\dot{y}$, $\dot{z}$, and that

$$\begin{aligned}\dot{Z} = \quad & M\dot{x} + N\ddot{x} + \mathcal{Q}\dddot{x} + \&c. \\ & + m\dot{y} + n\ddot{y} + \&c. \\ & + \mu\dot{z} + \&c.\end{aligned}$$

then by the above process

$$N\ddot{x} = (N\dot{x})^{\cdot} - \dot{N}\dot{x}$$

$$\begin{aligned}\mathcal{Q}\dddot{x} &= (\mathcal{Q}\ddot{x})^{\cdot} - \dot{\mathcal{Q}}\ddot{x} \\ &= (O\ddot{x})^{\cdot} - (\dot{\mathcal{Q}}\dot{x})^{\cdot} + \ddot{\mathcal{Q}}x \;\&c.\end{aligned}$$

hence by substitution

$$\begin{aligned}\dot{Z} = \; & (M - \dot{N} + \ddot{\mathcal{Q}} - \&c.)\,\dot{x} \\ & (N\dot{x})^{\cdot} - (\dot{\mathcal{Q}}\dot{x})^{\cdot} + \&c. \\ & + \&c. \;\&c.\end{aligned}$$

hence for Z to be an exact fluxionary equation

$M - \dot{N} + \ddot{\mathcal{Q}} - \&c.$ must equal O.

This formula is simple and elegant, but it deserves especial notice, since it is the same which occurs in the solution of isoperimetrical problems: or it is the essential formula in the

Calculus

Calculus of Variations. The isoperimetrical problem, taken in its greatest extent, consists in finding equations that must obtain between the variable quantities; so that the unknown integral function of a given function of those variable quantities, and their fluxions, shall become a maximum or minimum.

The problem of the *Criteria Integrabilitatis*, and the isoperimetrical problem, are resolved by the same formulæ of equation; with this difference, that in the former case the equations are identical, while in the latter problem they become the necessary equations between the variable quantities, for the existence of the maximum or minimum.

From the time of Newton and *James Bernoulli* to the present, the general solution of the isoperimetrical problem has been attempted and variously performed by several mathematicians; and the researches, thence originating, have led to the calculus of variations laid down with great exactness and elegance by M. La Grange, in the Turin Memoirs.

The problems of maxima and minima were not unknown nor unattempted by antient geometricians, since we find a book (the 5th) in Apollonius which treats solely of the greatest and least lines that can be drawn from given points to the arcs of conic sections. The method of Apollonius is similar to that which has ever been used by mathematicians, who have solved problems of maxima and minima by processes purely geometrical.

Fermat was the first mathematician who, for the solution of problems of this kind, gave a direct and analytical method, which the algorithm of the differential calculus has since simplified and generalized: and the principle and practice of his method are well known to our mathematical readers. The questions solved by this mode are those of the common maxima and minima; and the maxima and minima, which are the subjects of the isoperimetrical problems, arose from questions of this kind: as when, for instance, it was required to determine curves which, relatively to co-ordinates given in magnitude and position, inclosed the greatest space: or when it was required to trace the curve along which a heavy body, from one point to another, not situated in the same vertical, would descend in the least time possible.

The first problem of this kind, which was resolved, is that of *least resistance:* In the *Principia*, 1687, Newton published the characteristical property of this curve, but without analysis and demonstration. It is, however, the problem of the curve of quickest descent, that called forth the true principles on which the solution of this class of problems depends. *Leibnitz* and *James* and *John Bernoulli* invented methods for resolving the

the new problems of maxima and minima. They assumed as a fundamental principle, that, if a curve possessed a certain property, the same property would hold for the *infinitely* small parts of the curve; the curve being composed, according to the principle of the infinitesimal calculus, of infinitely small right lines, it was necessary to compare the position of two adjacent elements of the curve, or in some cases of three; and the differential or fluxionary equation being found, the case was brought under the laws of the antient and acknowleged theory of maxima. It was thus that the problems of the line of quickest descent, and of the solid of least resistance, were solved. The same method was applied to problems more complicated; to those in which it was required, among all possible curves of the same perimeter and length, to determine such as, within assigned limits, inclose the greatest or least spaces, or such as, in revolving round their axes, generate the greatest or least surfaces, or the greatest and least solids, &c. Problems of this nature are, as it must be perceived, isoperimetrical; and the importance attached to them from their difficulty, and from the celebrity of the great mathematicians who were occupied with their solution, has been the reason for giving the name of isoperimetrical to all problems in which it is required to find curves that possess some property of maximum or minimum, either with or without the condition of equality in the lengths of the curve.

'When we wish, (says the author,) to estimate this condition, it is not sufficient to vary a single ordinate, as in the problems in which an absolute maximum or minimum is required: it is necessary to consider variable, at the same time, two indeterminate quantities, as well in the expression that must be a maximum or minimum, as in that which ought to remain constant; and separately to make the results of these variations equal to nothing, or the differentials of the two expressions, as in the ordinary problems of maxima and minima, when some particular condition between the variables must be observed.

'*John Bernoulli*, in a memoir destined for the solution of isoperimetrical problems, proposed by his brother James, and which is found in the selection of the Academy of Sciences for 1706, thought that he satisfied at once the condition of maximum or minimum, and that of *Isoperimetism*, by considering only two elements or sides of the curve, and by making to vary at once the abscissa and ordinate which answer to the angle of these two right lines, so that their sum should remain constant. In fact, if the question depended on finite quantities, it might be resolved in this manner: but it happens, in this case, from the nature of infinitely small quantities, that the final equation becomes purely identical, and consequently determines nothing. *John Bernoulli* arrived at another result, but his analysis is erroneous, and offends against the principles of the infinitesimal calculus.

'*James*

'*James Bernoulli* is the first who recognised, in questions of this kind, the necessity of considering three successive sides of the curve, and in making at once to vary the two consecutive ordinates that answer to the angles formed by these sides. It is on this principle that he has founded his analysis of the isoperimetrical problem, intitled *Analysis magni Problematis Isoperimetrici*, published at Basle in 1701. and in the Leipsic Memoirs for the same year. The same principle has subsequently served as a base to the solutions given by Taylor, in his *Methodus Incrementorum*, by *John Bernoulli* in the Memoirs of the Academy of Sciences for 1718, and by *Euler* in the sixth and eighth volumes of the old Petersburgh Commentaries.

'By the consideration of an infinitely small part of the curve conceived to be formed of two or three straight lines, the problems are reduced to ordinary analysis: and the difficulty consists only in translating the solutions into differential equations, by the substitution of the values of the ordinates and of the successive abscissæ expressed by *Differences*, care being taken to preserve only the terms of the same order, according to the laws of the *homogeneity* of infinitely small quantities. The results, however, obtained in this manner, rarely present themselves under a general form, applicable to all problems of the same kind; moreover, there are cases in which it is not sufficient to consider an infinitely small portion of the curve, since the property of maximum or minimum may obtain for the entire curve, without obtaining for each of the infinitely small portions. These cases happen when the differential function, the integral of which ought to be a maximum or minimum, contains itself another integral function; except that, by the conditions of the problem, this integral ought to have a constant value; as for example, when the function, of which the integral ought to be a maximum or minimum, depends not solely on the abscissæ, the ordinates, and their differences, but moreover on the arc of the curve, which, as it is known, is only given by an integral expression: in this case the solutions found by the consideration of an infinitely small portion of the curve would not be exact, unless the length of the curve were constant, as in the isoperimetrical problems.

'*A fortiori*, it is not allowable, in the calculation, to consider only an infinitely small portion of the curve, when the differential expression depends on a quantity given simply by a differential equation not generally integrable. It is for this reason that we ought to regard as false the solution which *Euler* himself has given of the curve of quickest descent in a medium resisting as a function of the velocity, in the seventh volume of the old Commentaries of Petersburgh, and in the second volume of his Mechanics; and we may be convinced of this fact, by comparing it with the solution given in his work of 1744, intitled *Methodus inveniendi lineas curvas maximi, minimique proprietate gaudentes*

'Properly speaking, it is in this last work that *Euler* has given a general and complete solution of the isoperimetrical problem. In order to find the conditions of maximum or minimum, he causes to vary one ordinate alone of the curve, and he thence deduces the differential value of the formula which ought to be a maximum or minimum, by

substituting

substituting for the differentials of the ordinate the successive differences of consecutive ordinates; and for the integral expressions, the sums of the elements answering to the whole extent of the curve. His calculus thus becomes extremely long, principally for the infinite series that are involved in it, when the proposed function contains different integrals, and the sum of which it is necessary to determine, in order to arrive at neat and precise results; and we cannot sufficiently admire the address with which the author surmounts these difficulties, and finally obtains simple, general, and elegant formulæ. His work, moreover, is very valuable for the number and beauty of the examples which it contains; and perhaps no publication is more useful to those who desire to exercise themselves in the integral calculus.

'Until this time, mathematicians had treated separately, and by different processes, the problems in which it sufficed to cause one ordinate to vary, and those which demanded the variation of two or of more consecutive ordinates. *Euler* first remarked that all problems of this kind might be reduced under the same analysis; since the uniformity, that ought to prevail in operations relative to different points of the same curve, is the cause that after the result of the variation of an ordinate has been found, the same expression referred to the next succeeding ordinate gives the result of the variation of this ordinate, and in like manner of others.

'This remark conducted *Euler* to a beautiful theorem, and one that, on this subject, is of the greatest utility: viz. in order to find a curve that only possesses a property of maximum or minimum among all the curves which have one or more known properties, it is sufficient to add to the expression of the property that ought to be a maximum or minimum, those other known properties, each multiplied by a constant and arbitrary coefficient; and then to investigate the curve, in which this compound expression shall be a maximum or minimum among all curves possible.'

We think that this historical summary is very ably composed. M. La Grange next proceeds to make remarks on the solutions of Taylor and *Euler*: but he observes that such discussions as those into which he enters are useless, in the present state of analysis, since they respect methods forgotten and now superseded by others which are more general and simple. Such discussions, however, are not without their use: they are interesting to those who love to follow the progress of analysis, and to watch the formation of simple and general methods from particular questions, and from indirect and complicated processes.

It is no small recommendation to a peculiar process of calculation, that its language is simple and symmetrical: the more simple the law that regulates the formation of its formulæ, the better. *Euler*'s works contain sufficient rules and processes for solving the new problems of maxima and minima: but his

his calculus is void of mechanism, and is ill adapted to the simplicity and algorithm of the differential calculus. It was an objection of this kind, that determined M. La Grange to alter and adapt the latter calculus to the solutions of isoperimetrical problems, which has been executed with wonderful ability in the Memoirs of the Academy of Turin, where the *Calculus of Variations* is laid down and constructed. In this calculus, formed on the basis of the differential, the author introduced, as the symbol of the process of variation, the character δ, analogous to the character d, the foreign symbol for taking the differential or fluxion. It is a peculiar excellence in the method and notation, that we can immediately write down the formula corresponding to the variation, from the formula representing the *differentiation*: thus, if

$$dZ = Mdx + Ndy + Pdp + \&c.$$
$$\text{then} \quad \delta Z = M\delta x + N\delta y + P\delta p + \&c.$$

In the isoperimetrical problems, the analytical difficulty is reduced to finding the value of $\delta \int Z = o$ or of $\int \delta Z$; which, by means of the above formula, and by the method of integrating by parts, (which we have already explained,) was readily done. If y, dy, &c. were only made to vary, then

$$\int \delta Z = o = \int \left\{ N - dP + d^2 Q - \&c. \right\} \delta y$$
$$+ \left\{ P - dQ + \&c. \right\} \delta y + \&c.$$

$N - dP + d^2 Q - \&c. = o$ is the equation that determines the relation of x and y; and $P - dQ + \&c.\ \delta y + \&c.$ is the equation of limits, not given in former methods.

The notation of this method, however, which was one of its principal advantages, the author now proposes to demolish; and another, he says, must be contrived, more conformable to the principle and notation of the calculus of functions. With this object in view, instead of δy $\delta^2 y$, he puts $\dot{y}$, $\ddot{y}$, and instead of δdy, $\delta d^2 y$, $\dot{y}'$, $\ddot{y}''$ (x being constant): so that, for instance, the variation of V, which in his own and in former treatises stood thus,

$$\delta V = d(V\delta x) + N(\delta y - dy\delta x) + Pd(\delta y - dy\delta x) + \&c.$$

now appears under the form

$$\dot{V} = V'\dot{x} + N(\dot{y} - y'\dot{x}) + P(\dot{y} - y'\dot{x})' + \&c.$$

The dissimilarity of notation and of symbolical language, which obtains in the works of English and of foreign mathematicians, has always appeared to us an evil of considerable magnitude; and every one who is in any degree imbued with mathematical learning must have felt it:—but, if dissimilarity

be an evil, change, unless for great and obvious advantages, is also an evil, and in general a *greater* evil. Now of all changes, surely that is the worst which employs antient symbols with different and new significations. Can any thing be feigned more calculated and more adequate to cause confusion and perplexity? Yet, from the slight specimen which we have given, it will appear that M. La Grange has done this; $\dot{y}$ $\ddot{y}$, &c. in English notation mean first and second fluxions, but in this new notation they mean *Variations*. To understand problems of the same kind, a mathematician must now learn three symbolical languages, in two of which the same characters have different significations. We have on a former occasion animadverted on the other changes of notation which, in late years, have been made by M. La Grange. His authority in all matters of pure mathematics is exceedingly great, but not unlimited; power seldom disputed is apt to be fanciful and capricious: but though we may be incommoded by the tyranny of caprice, we will never submit to it.

We have not much more to add concerning the contents of this publication. The theory of variations undoubtedly is laid down in the last chapter with great neatness and precision, and its application to several problems is shewn. We doubt, however, whether the student will be able fully to comprehend this theory in its uses and application, solely from the present volume; and we advise him to refer to the works of *Euler*, of *Charles Bossut*, and of *La Croix*, for on subjects of such difficulty, one book scarcely ever suffices: he will also be right in consulting the just but rough and unpolished solutions of *James Bernoulli*.

R.W.

Art. XII. *Mémoires de l' Institut National*, &c. *i. e.* Memoirs of the National Institute of Arts and Sciences. Vol. V.* 4to. pp. 563. Paris. Imported by De Boffe, London.

Literature *and the* Fine Arts.

The first paper in the Historical part of this volume contains an account of the labours of the class of literature and the arts, from the year 1801 to the year 1803, by A. G. Camus. At the latter period, the Institute underwent a change, and the class of the *Moral and Political Sciences* was suppressed; the present ruler of France, it would appear, not deeming it safe to allow subjects of that nature to be submitted to free discussion.

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* See the Appendix to our xlviiith Volume.

M. Camus

M. CAMUS informs us that M. *Du Theil*, by examining and comparing passages in antient authors which relate to the celebrated cities of Herculaneum and Pompeii, has discovered that the learned have mistaken in supposing them to have been completely overwhelmed by the eruption of Vesuvius, which happened in the first year of Titus, the 79th of the christian era; and he shews that these cities subsisted in a degree of splendour as late as the reign of Adrian. They are indicated as inhabited places in the geographical monument which bears the title of the *Map of Peutinger*: but they do not appear in the *Itinerary*, improperly termed that of Antoninus. *Du Theil* is of opinion that the complete destruction of the above two cities was the effect of the eruption of 471, to which Ammianus Marcellinus ascribes the most dreadful ravages. Inscriptions, which appear to belong to the middle ages, describe the miserable inhabitants of Herculaneum as having fled for refuge to Naples, where a part of the town was assigned to them, which was thence called *Regio Herculanensium*. A letter written by Cassiodorus, in the name of Theodoric, whose reign lasted from 493 to 526, gives us reason to conjecture that the inhabitants, who were able to escape from Pompeii, sought refuge at Nola in the Campagna. M. *Du Theil* states that attempts to lay open the two towns were made about the close of the sixteenth century, but that they were soon discontinued, and fell to oblivion.

M. *Sicard*, the celebrated preceptor of the deaf and dumb, has proposed a new theory of the conjunctions, according to which all of them are resolvable into one, and that one into the substantive verb *to be*, which he regards as the paramount conjunctive word. It would hence appear that the learned writer is not acquainted with the most ingenious and successful labours, in this field, of our countryman Mr. *Horne Tooke*.

M. *Villars* has communicated researches on the passage of Hannibal over the Alps, in which he rejects all the former routes that have been suggested, and contends that his course must have been over one of the St. Bernards.

A Sketch of the Life and Writings of N. F. de Wailly, Member of the Nat. Inst. By M. SICARD.—Descended from a respectable family, *de Wailly* was born at Amiens, 31st July 1724; and the success of his early application presaged his future fame. Being intended for the church, he devoted himself principally to the study of the learned languages, and to that of his own. He had the good fortune to commence his studies under the abbé *Valart*, well known for his literary attainments and services; and he finished them under *Philip de Prétot*.

Prétot.—When his education had been completed, he removed to Paris, and commenced as a teacher of the French language to foreigners; which employment, we are told, he discharged with unrivalled ability and success. His eulogist says that, in delivering his philosophical lessons, 'he made the Englishman feel the superiority of the French conjugation over that of his native language, the poverty of which is shewn by the multiplicity of auxiliaries which are used to supply its defects in that respect: he convinced the German how much the construction of his vernacular tongue yielded to that of the language which he was learning: he made the Russ sensible to all the advantages arising from the use of articles, which give a precision to ideas of which his native dialect is not possessed; and he persuaded the Italian and the Spaniard, that, if their languages were more harmonious, the French excelled them in its rythm and prosody.' The ingenious and worthy abbé tells us that his friend was enraptured when he could induce his foreign pupils to admit that the French language was capable of completely expressing thoughts, while others were adapted only to indicate them.

If any readers should take offence at this boasting, they will be disposed to forgive it when they reflect on the zeal and enthusiasm with which the deceased filled the useful province which he had undertaken. His published works grew out of the instructions which he delivered to his pupils; and some of the most valuable productions have proceeded from a similar origin. His first work appeared in 1754, and was intitled, *The Principles of the French Language, general and particular.*

The eulogist states that no grammarian ever excelled *de Wailly* in method; that in detail nothing escaped him; that under general rules he overlooked no exception; and that no one could better frame a formula to comprehend a variety of exceptions. He nicely distinguished collective terms into general and partitive: he felt exactly the difference between gerunds and participles, and knew their distinct applications; and if he was not a grammarian for philosophers, he is the best guide for those who desire to write and speak with correctness. —The abbé thus concludes his panegyric on this work:

'Though at first view it appears to be nothing more than an elementary performance on grammar, the author, in its course of passing through ten editions, has so greatly enriched it, that it may be said to be at once a complete treatise of grammar, logic, and rhetoric. All the statements of difficulties in regard to words, and the observations on them which occur in *Vaugelas*, *Bouhours*, *Ménage*, *Corneille*, *Beauregard*, and the Dictionary of the Academy, we find condensed in the *Principes*. A full disquisition on letters, another on punctuation, one

one on prosody, one on orthography, and one on versification, complete this valuable performance, which the author preferred to all his other works. This production exhibits all his talents, his erudition, his just views, and even the virtues of his soul. The happy choice of his examples was derived from the feelings of his heart, and the maxims which they contain formed the habits of his mind.'

The celebrated *Bauzée* was the friend of *de Wailly*; the one wrote a grammar for philosophers, the other, a grammar for the world; the production of the former has never passed the first edition, but the latter has gone through ten, while the abridgement has appeared in more than a hundred.

We are informed that, in re-editing the translations of other persons, *De Wally* almost new-made them. Such are his revisions of the translations of Select Orations of Cicero, and of Cæsar's Commentaries. His last labours enriched the Memoirs of the Institute; the first vol. of which contained a paper of his composition, on the ellipsis, a figure frequently employed in languages which have been considerably refined.

MEMOIR. *Of the Influence which the Inhabitants of the Isles of the Persian Gulf, and of the Southern Coast of Persia, from Carmania to the Indus, have had on Europe and Asia Minor.* By M. DUPUIS.—This writer states that, having in a former memoir, shewn that the people who inhabited the shores of the Arabic gulf had diffused themselves over Libya, as far as Mount Atlas, and passed thence to the Greek islands and to Europe, he now proposes to trace the migrations of the borderers on the Persian Gulf in the same direction, bearing with them arts, sciences, and civilization, and who are known in history under the name of Phœnicians. We shall not, he says, speak of the Libyan Phœnicians, or Carthaginians, but solely of those who spred themselves over the Greek and Asiatic islands, Thrace, Sinope, and the coasts of the Euxine as far as Scythia. It is an error, he contends, to confine the Phœnicians to the cities placed at the extremity of the Mediterranean, those of Syria, and Palestine. The Greeks gave this denomination to all the Orientals, who by sea came to trade with them, and who frequented any ports from Tarsus to Pelusium. When this migration of the Phœnicians from the Persian Gulf to the shores of the Mediterranean took place, we have no means of ascertaining, since it goes back to a period earlier than that at which the Grecian history begins.

We discover in this paper more of the parade and display of learning than of substantial information. The proofs advanced are too slender, and the hypotheses too uncertain, to afford the mind thorough satisfaction in regard to the conclutions which the author seeks to establish. Readers who have

a taste for tracing the pedigree of nations, the affinity of superstitions, and resemblances of national usages, will find the present memoir adapted to their pursuits: but for ourselves we do not hesitate to say, that we have derived from it neither instruction nor amusement. The author seems to intimate that the public does not set a sufficient value on his labours: but we own our opinion that the charge is creditable to its discernment. Our fleeting hours can surely be better employed, than in weighing conjectures which facts do not countenance, and which want even the support of probability.

Report made to the Class of Literature and the Arts, respecting the Panorama.—The National Institute ordered a commission to be appointed to make a report on this subject; and in the present paper this ingenious contrivance is fairly analyzed, and the principles of the illusion are stated.

'If this device (say the Commissioners) only served to supply food for curiosity, and if there resulted from it no other advantage than that of giving an exact representation of the most celebrated cities and situations of the globe, it would be highly interesting, and deserve to be encouraged as an object at once pleasing and useful; but is it not possible that this discovery may advance the fine art of painting? Does it not open a new tract in this respect? Does it not shew that means furnished by the sciences, united to a practical acquaintance with art, and the reasonings of an ingenious and calculating mind, may hereafter give rise to new prodigies? Whatever influence it may one day impart to the arts, whatever springs it may lend to genius, it has already furnished valuable hints as to the manner of exhibiting to the eye the master pieces of the pencil.'

Rural Scenery and Poetry, Verses by M. COLLIN-HARLEVILLE.—The ideas in this composition are pleasing, but the poetry consists solely in the rhime.

Report made on a Work intitled Elements of Practical Perspective for the Use of Artists, by P. H. Valenciennes, Painter.—Why, ask the reporters, have young artists been always so averse from the study of perspective? It is because the demonstrations cannot be comprehended without a knowlege of geometry, and because the rules without such a foundation are easily forgotten, as well as misapplied.—The reader will find in this paper very just observations on the art, and very apposite criticisms on the manner in which the author has treated it. The ingenious reporters thus sum up their remarks on the tract before them. 'Notwithstanding some errors, and though the author has entered into details which are misplaced in an elementary work, we ate of opinion that the *treatise* of citizen *Valenciennes* may be very useful to painters in general, and above all to those who study rural scenery; that it will assist

assist the artist in his study of linear and aerial perspective, enable him to apply its principles to painting, and impress him with the importance of study and observation.'

Memoir on the Harangues ascribed to Orators by the antient Authors, on the antient Masques, and on the Means supposed to have been employed by the Actors in order to make themselves heard by all the Spectators. By M. MONGEZ.—It is the object of this paper to reconcile the accounts given by antient authors of addresses delivered to vast multitudes, with the known powers of the human voice. The writer is of opinion that the speeches, which are said to have been addressed to whole armies, were made only to detached parts, or to the officers assembled by themselves: he endeavours to shew that, when orators or Generals spoke to immense numbers, they were heard only by those who were near them: he proves, from various passages, that when it was wished to address a large multitude, it was customary to assemble it in the theatres, where the structure of the building assisted the voice, but he is of opinion that the voice was no otherwise aided in these edifices; and he regards as superfluous those helps which some suppose it to have received from the intervention of metallic plates. Experiments actually made, and which are here related, demonstrate that the human voice is capable of completely filling those theatres which have remained entire to the present day, viz. those of Saguntum and Herculaneum.

A Discourse on Death, in Verse, by M. FRANÇOS, (*of Neufchateau.*)—This is a very pleasing performance; the style is elegant, the versification is easy and smooth, and the sentiments are animated and impressive. If we do not here find the confidence of faith, nor the cheering accents of christian hope, virtue is at least recommended as the wisest and safest course of man.

Memoir on the antient Statue lately belonging to the Villa Medicis, which has been known under the Designation of Silence. By M. MONGEZ.—This statue was one of seven that were dug up in the scite of the street Suburra, near the church of St. Mary Major, in the sixteenth century; six of which were those of women in their costume, and the remaining one represented Apollo. They were as large again as the real human figure.—The various conjectures that have been hazarded, with respect to the object which this statue designates, are here examined with learning and critical ability. Having exposed the hypotheses which suppose her to be Veturia, the mother of Coriolanus, or the goddess of Silence, or that of Memory, or Polyhymnia, the author gives his opinion that the figure is

an allegorical personage, the image of a subjugated country, with the features of a barbarian woman, intended as a trophy to adorn a triumphal arch. He states that the introduction of figures of this kind was usual in grand triumphal processions; and he shews that the costume is barbarian, and that the attitude and posture are those of which antient artists made use to denote deep sorrow. Some are of opinion that the statue is of the time of Adrian, and represents Judea; and the readers of Bishop Lowth's *Prælectiones* will recollect what a favourite practice it was among the Hebrew poets, to clothe their country with the attributes of the female character.

A Translation into French Verse of the Expedition of the Argonauts by Vâlerius Flaccus. Lib. I. By M. FRANÇOS, of *Neufchâteau*.—A specimen of spirited and inviting translation of a neglected and under-rated classic.

Memoir on the Ruins and Monuments of an antient City, now called Toull, situated in the Department of La Creuse. By M. BARAILON, Associate. — On a mountain, of which the summit is more than two thousand feet above the surface of the sea, this writer states that the evident remains of a Celtic town are discoverable; and that stones, some scattered and some in heaps, arrest the traveller's eye. An attentive examination will also enable him to trace the course of the walls, of which there appear to have been several. In these edifices and erections, no mortar seems to have been used, but the crevices between the stones were filled up with earth and clay. The houses had apparently neither windows nor chimnies: but the fire, it is supposed, was placed in the middle, and the smoke was left to find its way out through the roof. No trace of brick was discovered; and this antiquary therefore concludes that these miserable dwellings were covered in with thatch, conformably to the accounts given by Cæsar and Diodorus Siculus.

The town appears to have been in the form of an amphitheatre, and to have been surrounded by three walls of different thicknesses. The huts were low, placed close together, and the streets seem to have been only four yards wide: but it exhibits evidences of having been a populous place. In all directions in the vicinity of Toull, the author discovers Celtic ruins. These remains of antiquity, he remarks, deserve to be investigated and studied, if we would make ourselves acquainted with the genius of this antient people, their religion, manners, arts, and social attainments. By stripping their worship of whatever was atrocious and barbarous, we might perhaps meet with many things that are interesting, and that con

cern history.—He does not seem to participate in the strange pleasure which some moderns take, in depreciating the antient population of the South of Europe, we mean the Celtic nations. He refers to Diodorus as extolling their skill in works of gold, silver, and brass; in ornamenting with these metals their helmets, tunics, and belts; and the facility with which they constructed their weapons. The descriptions which have reached us of their garments, and of the robes of the Druids, are proofs of considerable progress in various manufactures, and in the art of dyeing. Dion Chrysostom celebrates the magnificence of their kings; Polybius and Florus take notice of the splendid appearance of their Generals when they went to battle; and other authors dwell on the elegance and beauty of their military cars, which were painted, and even ornamented with gold and silver.—In the cemetary, he states, Gallic, Roman, and antient and modern christian monuments are to be seen; and from the vast bed of rich earth of which this depository consists, and with which nothing near it corresponds, all the country around being most barren, he infers that numerous human bodies have been interred, and that the place must once have been eminently populous. He concludes by observing that the situation of this city, the nature of its fortifications, and the form of its buildings, confirm the accounts given of the Celts by early authors; and he invites the attention of the antiquary to the spot which he has been describing, as a field worthy of his exertions, and in which important discoveries may be made.

Solitude and Love, by M. Ducis.—If the reader will pardon the improbability of the incidents, he will be pleased with the sentiments, and edified by the reflections, which pervade this agreeable little poem.

Report made to the Institute on the Labours of M. M. Herhan, Ollivier, and Dupeyrat; or a second Memoir on the History of the Stereotype. By M. H. G. Camus.—This paper brings down the account of this interesting art to the present time. Of the former part we have already taken notice. The relations now before us consist so much of descriptions of mechanical contrivances, and descend into so many minute details, that it is impossible for us to communicate even a general notion of them within any reasonable limits; we must therefore refer the amateur to the Report itself.

Additions to, and Corrections of, a Memoir on the Teurdank (an old German work, which appeared in the third Volume of the present Collection.)—We noticed the former paper on this subject in Vol. xxxviii. N. S. p. 492; and we do not find any important additions in the present supplement.

Report on the Restoration of a Painting of Raphael, known under the Name of the Virgin of Foligno by M. M. GUYTON, VINCENT, TOURNAY, and BERTHOLLET.—We learn from this report that the art of restoring decayed paintings to their primitive distinctness has reached a degree of perfection which is hardly credible; and that it chiefly owes its progress to the Directors of the Central Museum of the arts. When this body determined to attempt the restoration of the painting in question, they requested the Institute to appoint a commission from among its men of science and artists to superintend the process; every step in it was first stated to them, and commenced under their inspection; and the undertaking has been attended with the most complete success. The *chef d' œuvre* of Raphael has been restored to life in all its original splendor, and by methods which annihilate all fear of our losing it through such accidents as had nearly deprived us of it.

Researches into the Use of Hemp in Antiquity, and during the middle Ages. By M. MONGEZ.—This writer observes that Herodotus, who states that hemp grew in Scythia, is the first Greek author who mentions that vegetable, and it is evident from his account that he had never seen it. In the time of Pausanias, it appears that it was cultivated in Greece. In Thrace they fabricated hempen clothes as early as the time of Herodotus, while in Greece they confined its use to cordage and tow; and it is not recorded that in the south of Europe it was applied to any other purpose till as late as the twelfth century.—It was not merely the rind of the hemp that was used by the antients; they produced, by exposing its seeds to ignited bodies, a vapour which had the effect of producing intoxication in those who inhaled it.—We are also told that the modern Egyptians chew the grains of hemp, which induce inebriety, and render them quarrelsome, furious, and even sanguinary.

Report on the Continuation of the Dictionary of the French Language, by M. Andrieux, in the name of a Commission composed of M. M. NAIGEON, BOSSUT, DACIER, DOMERGUE, LACÉPÈDE, and ANDRIEUX.—A few important reflections strongly attract attention to this short paper. The reporters observe that

'We are not to suppose that languages follow an uniform course; there are periods in which they advance rapidly in improvement, and there are others in which they decline: while there are also epochs in which they seem to have attained the summit of splendour These epochs are the periods in which writers in all branches are men of genius; such was the age of Louis the Fourteenth in France. Assuredly the language of *Pascal*, *Racine*, and *Fenelon* ought to have been fixed, it a living

a living language were capable of being determinate. As the calm of mature age succeeds to the ardour of youth, the eighteenth century has less followed the flowery and unequal paths of the imagination than the uniform career of reason. Language has been affected by this new direction of mental application; it has become, by its precision and its clearness, a good instrument of analysis: philosophy also has obtained possession of it, has subjected it to method, and has applied it to intricate discussions.

'In poetry and in eloquence, it must be admitted, language has deteriorated: the literati are few who are faithful to true principles, and who copy good models; we have gone to a distance from truth and nature; we have confounded the several species, and we have mixed styles; our compositions are subject to no rule; we have retreated beyond the age of Louis the Fourteenth towards the monstrous poetry of *Ronsard*, and the affected conceits of buffoons.

'In the course of the revolution, exaggerated ideas produced corresponding words; strange associations and incoherent expressions were taken for eloquence; men of no education, or of a vicious one, set up as orators, poets, and writers; they were desirous of exciting attention, and, unable to accomplish this object by methods which taste sanctioned, they had recourse to a boldness of style which was in perfect unison with their conduct; they adopted barbarous phrases and unnatural turns; and they had too many imitators who mistook bombast for grandeur, and extravagancies for instances of happy daring.'

It is then remarked that the Institute has not hitherto been able effectually to denounce these excesses, and to assign the limits which it forbids to be passed in these matters: but the commission strongly urges the learned body to commence that grand undertaking, and suggests the steps which should be adopted in order to carry it into effect.

Notes relative to the public Exhibition of Articles of French Industry, which took place in the complementary Days of the Years six and nine, or the Periods of the autumnal Equinoxes of 1798 *and* 1801. By M. A. G. Camus.—The advantages of the practice here recorded are represented in a luminous and a striking manner; and the author claims in favour of France the origin of the usage. The effect, however, of this custom, has been long obtained in a great degree in most commercial countries; since the visits paid by the curious to manufactories, and the exhibitions in splendid shops, answer almost all the purposes sought by the exposure which this writer recommends.

Speaking of the liberal and mechanical arts, M. Camus very properly observes 'that philosophy rejects the distinction, and that it should no more be countenanced; all arts exercised by freemen are liberal; and the artisan ought no longer to be

considered as inferior to the artist.'—He thus concludes his ingenious paper:

'May these reflections, which are extremely general, on a subject which well merits particular investigation, serve to signalize an epoch in our history which is infinitely precious to the arts; convince us more and more of the benefits which philosophy and liberty—those daughters of the skies, those friends of men, those comforters of miserable mortals—confer on the arts, on commerce and political societies; and demonstrate by facts, which are of so much more importance than vain theories, how highly it interests states that all the parts of the public administration should be confided to men, who, from natural taste, have successfully cultivated letters, science, and the arts.'

so far Jo.

Memoir on the Bronze of the Antients, and on an antique Sword. By M. MONGEZ.—After having given a minute description of an antient bronze sword, found under the turf with the skeletons of a man and a horse near Corbie, on the borders of the Somme,—and having stated the metal to be composed of 12.53 of tin and 87.47 of copper, with a small quantity of zinc, but without the addition of any iron or arsenic, and explained the manner of its fabrication,—M. MONGEZ inquires to what nation it could have belonged; and he is persuaded, notwithstanding that the Romans in general used iron swords, that it must have appertained to one of that people. To settle the questions, however, which might have arisen relative to this antique sword, is a secondary object with this writer. He chiefly employs himself in an inquiry into the nature of the bronze of the antients; which, he is of opinion, never consisted of pure or red copper, but always admitted an alloy of tin into its composition, by which it was rendered much less dangerous when used for wine vessels. Yet this alloy did not prevent the formation of verdegris on the surface of the bronze, for the evidence of Pliny will prove that tinning was invented in his time *compescere æruginis virus;* and though no tinned bronze vessels were found in Herculaneum, multitudes were discovered doubly silvered.—Returning to the subject of bronze, M. MONGEZ observes that the antients, by hammering, made this mixed metal tough and elastic; and he inclines to think that it would be preferable to iron in many cases, particularly for the springs and axle-trees of carriages, and for the fastenings of rudders in ships. He does not believe that the antients had the power of tempering copper.—By experiments made with the acids, tin is always discovered in bronze, but no iron nor arsenic ever is detected.

This memoir concludes with explanations of two Latin passages, indicative of the knowlege of the Romans in the metallurgic art; and with an estimate of the present value of lead

lead and tin, compared with its price at Rome in the time of Pliny. Among the Romans,(the writer remarks,) lead was three times dearer than tin; while with us tin is three times dearer than lead, which obtained eight times its present price in antient Rome.

A second Memoir on antient Bronze, on some Swords, and on an elastic Ring of the Antients. By the same.—M. MONGEZ here offers his remarks on three antique swords found in the vicinity of Abbeville; and on a ring which is curious as being the only specimen of elastic bronze that has descended to us from the antients. As to the three swords, they differ very little from that of which notice is taken in the preceding paper, and these also, according to M. MONGEZ, are Roman. With regard to the elastic ring, its external diameter is stated to be four inches and two lines, and its internal three inches and eight lines; and the thickness of the metallic plate, of which it is manufactured, is about four lines. It is composed of copper alloyed with about one ninth part of tin. The author is persuaded that it was intended for a collar.—The use of elastic bronze for springs, &c. is again recommended to coachmakers.

Memoir on a Sword belonging to the Gauls, and on the Method adopted by the Antients for converting Iron into Steel. By the same.—Numerous quotations are here made from the Greek historians, to shew of what metal and of what shape the swords of the Gauls were manufactured; and by comparing the sword which is the subject of the present inquiry with the accounts of Polybius, Plutarch, Dion Cassius, and Strabo, M. MONGEZ is convinced of its having belonged to the people to whom he has assigned it: because, like the swords of the Gauls, it is made of soft iron, (σιδηρον μαλακον, as Plutarch calls it,) was not designed to thrust, but to cut, and is one third longer than the Roman Infantry swords, measuring thirty-three inches ten lines. It was dug up near Abbeville.—The other objects, of which an explanation is attempted in a subsequent part of this learned memoir, were discovered in an antient burying-place at Velu near Bapaume, Pas-de-Calais. They consist of a bawdric or belt, of a plate with a grotesque engraving on it, and a writing style; and they are pronounced, like the sword just noticed, to have belonged to the Gauls.—It must be owned that M. MONGEZ supports his opinion by a weight of evidence. Though the processes employed by the antients for converting iron into steel, and for tempering their sword blades, were probably very simple, and the result of accident, the author despaired of finding in their writers any accounts of them: but, happening to see in the catalogue of the National Library a collection of MSS.

MSS. written by the Greek chemists, one of which was intitled Περι βαφῆς Ινρικε σιδηρε, *on the tempering of the Iron of India*, he by means of this MS. obtained the very object of his research. We cannot convey a clearer idea on this subject than by transcribing one of the recipes for making steel, which is given by the Greek metallurgists:— "Take some iron, and divide it into small pieces; take the bark of that kind of palm which the Arabians call *elileg*, and of those which they name *belileg* and *ambleg*; then take some female magnesia. Shake these substances together; mix them with iron; throw all together into a crucible, under which light a charcoal fire, and stir about the fire till the iron becomes fused." The magnesia, or manganese, in this receipt, could be of no service; and the idea that the bark of particular trees was essential is erroneous: but it is hence evident that they knew how to communicate a sufficient quantity of carbon to iron, so as to convert it into steel.

Researches concerning the Fishing of the Antients. By M. Ameillon.—We have here the first of a series of memoirs which, if we may judge from the writer's plan detailed in the opening of this paper, bid fair to exhaust the subject. He laments that the writings of the eight authors on fishing, cited by Athæneus, have not descended to us: but he hopes, by the assistance of Aristotle, Pliny, Oppian, Ælian, and of their commentators, particularly of Aldrovandus, to be able to procure a tolerable dish for his readers. After having discussed the four modes of fishing enumerated by Oppian, he proposes to notice particular practices of the antients which do not fall under any of those heads; to subjoin a variety of supplementary discussions; and to affix to the whole a glossary and explanation of all the technical fishing-terms employed by the antients. The paper before us relates merely to the first of these divisions, viz. *fishing with the line and hook.* To some individuals, this inquiry will be amusing, but not to the general reader; and we shall therefore dismiss it without a minute examination.

Memoir on Printing, or striking off (sur l'impression) geographical Charts, &c. by means of moveable Characters. Extracted from a memoir on the progress, present state, and mode of bringing to perfection the art of Printing. By M. A. G. Camus. — This paper will be better understood by compositors and printers than by *other men of letters.* The execution of maps, charts, plans, &c. by the double process of engraving the outlines and printing the names, is not a new device: but it can never be so exact and neat as to satisfy the curious. The use of moveable types alone in this business must be still more imperfect; and we wish not to encourage

printers

printers in this speculation.—Typography has its limits, which it ought not to attempt to transgress.—The immense quantity of types, which chart-making would require, must confound the compositor.

from p. 520.
Mo-y.

From the report which we now terminate, our readers will see that this massy volume, though containing some papers of value, does not claim merit in proportion to its bulk; and that few are the obligations which it imposes on either literature or the arts.

Jo.

see p. 520.

ART. XIII. *Relacion en la que se Elogia sencillamente, á los Heroes del Combate del dia 21 de Octubre*, &c. *i. e.* A simple Narrative in honour of the Heroes of the Battle of the 21st of October, sustained by the Combined Squadron against the English Fleet commanded by Admiral Nelson. 8vo. pp. 12. Madrid. 1805.

ART. XIV. *El Combate naval del 21 de Octubre*, &c. *i. e.* The naval Action of the 21st of October. By Don JOSE' MOR DE FUENTES. 8vo. pp. 23. Madrid. 1805.

ART. XV. *Sombra de Nelson. i. e.* The Shade of Nelson. 8vo. pp 8. Madrid. 1805.

BRITISH readers will probably feel not a little surprize at these attempts to perpetuate the remembrance of a day which was so inauspicious to the arms of Spain; and some credit is due to the writers, for the ingenuity with which they labour to produce an impression on the whole favourable to their countrymen, though at the expence of a *few* deviations from historical truth. The view which each author has taken of his subject is not less distinct than the style of the different performances. The first, agreeably to its title, begins thus:

> *'Supuesto que en el diario*
> *nos convidan y' alborotan*
> *á escribir sobre el Combate,*
> *bien sea en verso, ú en prosa;*
> *Yo como Español castizo,*
> *aunque no entiendo una jota,*
> *mojar como convidado*
> *quiero en la salsa una sopa;'*

i. e. 'Since the *Diario* (a newspaper so called) invites and urges us to write on the subject of the battle, either in verse or prose; I, like a true born Spaniard, although without a grain of wit, accept the invitation, and will dip my bread in the sauce.' The writer proceeds in the same humble strain, to state

state the commencement of the present war between France and England as originating in the jealousy of the latter, the piratical seizure of the four frigates, the junction of the allied squadrons in Cadiz, the expedition to the West Indies, crowned with the capture of the inacessible Diamond Rock, the action with Sir Robert Calder, (in which the English are said to have been *beaten off*,) and the return of the fleet to Cadiz, where they received fresh reinforcements of troops and vessels. To oppose this force, England is next represented as fitting out a grand armament, at the head of which is placed Nelson; whom the author praises for his great skill and courage, but whom he asserts to have been chiefly animated by a desire of revenging the loss of his arm, *of which a Toledo blade, guided by Spanish valour, had deprived him in the Canary Islands.* The battle itself is dispatched in a summary manner, and in very general terms. Towards the end, he says,

'Separanse al fin, quedando
indecisa la victoria,
porque de las tres Esquadras
fué la pérdida pasmosa.'

'At last they separate, and leave the victory undecided, each squadron having suffered a tremendous loss.' Afterward, however, he thinks it proper to be more explicit. Having enumerated the Spanish officers of distinction who were killed or wounded, he adds:

'Pero aunque son tan sensibles
nuestras pérdidas notorias,
la satisfaccion logiamos
de ver á la fanfarrona
Nacion Inglesa de luto
por la muerte lastimosa
de su gran General Nelson,
en quien su esperanza toda
tenia depositada;
pues su pérdida mas monta
que la de los otros Gefes,
los diez mil hombres de tropa,
los ciento cincuenta y dos
de Oficialidad briosa,
y diez y nueve navíos,
que han perdido en la derrota.'

'But though our losses are great, we have the satisfaction of seeing the vain-glorious English mourning the lamentable death of their great Admiral, in whom all their hopes were centered; for the loss of Nelson is of greater moment than all the other chiefs, the ten thousand soldiers, and the hundred and fifty-two brave officers, and the *nineteen ships*, of which this engagement deprived us.'

After

After this unwilling tribute to the memory of our great hero, the author closes the poem with exhorting his countrymen to join the fresh levies then raising to avenge the liberties of the seas. We should not, however, imagine that he would be successful in persuading many to enroll themselves among a class of men, the value of whose lives and services may be calculated by a method so compendious as that which he has exhibited.

Lest our readers should mistake this poem for mere blank verse, it is perhaps necessary to state that it is written in *Romance*, a term applied by the Spaniards to a particular species of versification, which is the favourite metre in all their dramatic compositions. The lines, consisting of eight syllables, are alternately blank verse and *Asonantes*, a sort of imperfect rhyme peculiar to the poetry of Spain. The difference between the *Consonante complete* or rhyme, and the *Asonante*, is, that while in the former the last accented vowel in the line and all subsequent vowels and consonants are required to be the same as in the word with which it is intended to rhyme, as *quexes* and *dexes*, *naciste* and *triste*, in the latter the vowels must be the same, but *all the consonants different*, as *dicho* and *affirmo*, *debo* and *presto*, *rápido* and *Mário*. As a compensation to the ear for this less perfect echo, the poet is expected to use the same Asonantes throughout the whole act or piece; thus, albo*rotan*, pro*sa*, jo*ta*, so*pa*, victo*ria*, pasmo*sa*, noto*rias*, fanfarro*na*, &c. are all *asonantes* to each other.

Don Jose' Mor De Fuentes assumes a much loftier tone than the preceding writer. He strictly limits his muse to a description of the battle of Trafalgar, which is written with great spirit and animation; and he particularizes the gallant actions and the deaths of several of their principal Commanders: but his account of the commencement of the combat shews that his statements are not always worthy of reliance:

' Ardiendo Nelson en venganza impia
Por su patente mutilado miembro,
Y Abukir, Copenhague en su memoria
Con frenético orgullo repasando,
Al descubrir la tremalante insignia
De Cisneros, aspira á la alta gloria
De arrebatar la Trinidad ansiada,
Y con furor clamando
Corra en arroyos la Española sangre
Se abalanza feroz .... mas no se atreve
A medir el aleve
De nave á nave su marcial pujanza,
Y de dos almirantas auxiliado
La escelsa popa á rodear camina,

Quando

Quando atento el Guerrero consumado
Las anchas velas contrapone al viento,
Y dócil á su voz la inmensa mole,
En retrógrado obliquo movimiento,
Las espumosas olas arrollando
Y la trémula atmósfera atronando,
Por quatro filas destrozantes rayos
De su enorme costado
Con instantâneo incendio le fulmina.
Huye el Breton, qual lidiador burlado
Que asaltó con ardid la invicta fiera,
Y al mirar sobre sí su frente armada
Con fuga apresurada
Y zozobra mortal, procura ansioso
Ponerse en salvo de su cruda sana.'

'Nelson, burning to revenge his lost limb, and proudly revolving in his mind the days of Aboukir and Copenhagen, on discovering the floating ensigns of Cisneros, aspires to the glory of capturing La Trinidad, the grand object of his ambition; and with fury exclaiming, "Let Spanish blood flow in torrents," he fiercely commences the attack... but the ungenerous foe ventures not, ship opposed to ship, to measure his prowess—supported by two more vessels, he endeavours to surround her lofty stern:—our consummate warrior, by whom nothing is overlooked, opposes the broad sails to the wind;—the immense machine, obedient to his voice, cuts the foaming billows in an oblique direction, and, from four batteries in her enormous side, lances thunderbolts which carry fire and devastation among the foe. The Briton flies; like a combatant who, baffled in his attempt to subdue by treachery the unconquered bull, beholds the dreadful forehead of his antagonist threatening instant destruction, and, agonized with fear, seeks shelter from his mortal fury.'

This poem is written in the wild and irregular measure on which the Spaniards have bestowed the appropriate name of *Silva*. It is inscribed to Don *Antonio Escano*, Vice Admiral, or, according to the Spanish phrase, Lieutenant General of the fleet, in whose company the author had visited Tuscany. They appear also to have been at sea together, but it is not said that the writer was with him on this occasion; a circumstance too interesting to have been omitted if it had occurred.

In the third poem, the shade of Nelson, rising in the storm from the *awful scene* of devastation and carnage which had closed the engagement, announces to the haughty genius of Britain the woes which the vengeance of France and Spain is preparing to inflict on his devoted country. The whole performance is marked with considerable elegance and dignity of language, and abounds in images and descriptions which are grand and impressive. The inferiority not only of the two poems above mentioned, but of several produced on the same theme on our own side

side of the water, to this work of the imagination, reminds us of the assertion of Waller; who, when Charles the II. complained that his panegyric on Cromwell was superior in poetical merit to the congratulation presented to himself on his restoration, is said to have replied, 'Poets, sir, succeed better in fiction than in truth.'

Ja.Man.s jun.r.

ART. XVI. *Winkelman und sein Jahrhundert*; &c. *i. e. Winkelman* and his Century. In Letters and Treatises edited by Baron GOETHE. 8vo. pp. 496. Tubingen. 1805.

PERHAPS no man, during the last century, has exerted so much influence over the study of antiquities and the polite arts, as the abbé *Winkelman*. Before his time, few had entered into the ideas and caught as it were the spirit of the antient artists, whose works were generally admired for their external beauty alone, and were considered rather as productions of skilful hands than of great minds; while the characteristics which belonged to different nations, or different periods, were strangely confounded. He boldly attacked the prevailing opinions; and important changes in the manner of arranging and estimating the most valuable remains of antiquity, as well as in the general taste, were the gradual consequence of his indefatigable investigations and ingenious conjectures. In the midst of Rome, as has been said of him, he lighted the torch which guided to a thorough investigation of antiquity, and pointed out to the modern artist the path which his admired predecessors had trodden. The great and difficult problem of a history of the art was by him better understood than it had ever been before; and a basis was laid, on which a second *Winkelman* might erect an admirable structure. Prepared for the contemplation of the treasures of Italy by a profound knowlege of the antient writers, and less prejudiced by early impressions than his precursors, he possessed more of those numerous qualities which ought to be united in a good antiquary; and though the fire of his imagination, with his too great eagerness to communicate to the world what he supposed he had discovered, and to produce a sudden revolution in the dominions of taste, frequently betrayed him into errors and hasty conclusions, he much more frequently astonishes us by his correct judgment, and by the quickness with which, on contemplating a painting or a statue, he perceives the design of its author, and appreciates its real origin and value.

Winkelman's works form the true picture of his life and character. Embracing with enthusiasm every new idea that entered his mind his writings, says the author of the work before

us,

us, 'composed and printed as we now see them, depended on a great variety of trifling circumstances; and had he waited one month later, perhaps, we should in each case have received a different work, more correct in its contents, and more pleasing in its form. We find him always devoted to the idea of the present instant, and seizing it as eagerly as if it could produce perfection; and in the same manner he was again the creature of the succeeding moment. His productions and his letters resemble, like the life of most men, a preparation for a work, not a work itself; they excite *hopes* and *wishes*.'

By the letters and treatises which he has given to the public, Baron GOETHE designs not only to revive the memory of their author, but also to throw additional light on his character and influence, as well as on the period in which he lived. The volume is divided into three parts, entirely distinct from one another; the first contains 27 letters from *Winkelman*, which are now first printed; the second offers a sketch of a history of the arts during the 18th century; and the third presents a delineation, or rather traits for a delineation, of the abbé's character as a man, a scholar, and a writer.—The letters are addressed to one of the writer's most intimate friends, *Hieronymus Dieterich Berendis*, a native of Sechausen, and who was for some time tutor to the son of the abbe's patron, Count *Bunau*, and died in the year 1783, as counsellor to the Dowager Duchess of Weimar. They are dated between the years 1752 and 1767, partly from Nothenitz and Dresden, partly from Rome, and are more interesting as additional illustrations of his candour, of his enthusiasm in friendship, and of the state of his mind during a very extraordinary period of his life, than on account of the literary information which they contain. Those from Nothenitz and Dresden will be read with most pleasure; since, among the 425 letters from *Winkelman*, which have been printed in different collections, four only, addressed to Count *Bunau*, relate to that part of his life which was rendered remarkable by his abjuration of protestantism. They exhibit the grateful feelings of his heart, which revolted at the idea of offending his patron; the struggle between duty and inclination, which the proposals from the confessor of the King occasioned; and the sophistry with which he endeavoured to defend, to himself and to others, the step which he was about to take. The following letter to *Berendis*, dated Nothenitz, Jan. 6th 1753, is inferior only to the famous *Gallimatia* addressed to Count *Bunau* soon afterward:

'Never did I feel more difficulty in writing a letter than I do now. I fear, dearest of all friends, that your anger and displeasure will be my lot, after so many fruitless remonstrances. You have advised me as

as a father counsels his child; and your reasons, dictated by your tender and faithful heart, have convinced me more than I like, that my change is dangerous. God is my witness, how the thought of forfeiting the favour of the Count torments me.—You know that I have renounced all pleasures, and sought only truth and science; you know what difficulties I have encountered; through want and poverty, through troubles and distress have I been obliged to make my way. Almost in every thing I have been my own guide. Love of science, and this alone, induces me to listen to the proposals made to me. It is my misfortune not to have been born in a large town, where I might have had a good education, and opportunities for following my inclination and improving myself. God and nature intended to make me a painter, a *great* painter; and in spite of both I was doomed to become a priest. Now both the priest and the painter are spoiled. But my whole heart is devoted to the knowlege of painting and antiquities, which I must improve by greater skill in drawing. Did I still possess the fire or rather the spirits which I have lost by assiduous study, I should advance farther into the arts. Now I have no path open in which I can distinguish myself, but that of Greek literature; and I can find no place more proper to increase this knowlege, and, if possible, to carry it to the highest pitch, than Rome. You may easily imagine that the offers of father R. are not made *sine conditione sine quâ non.* This is the most important point. Ευσεβια and the muses are at variance within me, but the party of the latter is the strongest; and reason, which in such a case ought to act the contrary part, joins with them. She is of opinion that a love of the sciences may induce us to overlook some theatrical farce, and that true religion is in all churches to be found only among a chosen few. I will interrupt the voice of reason, and tell you presently how I think. You will, I hope, understand me; I dare not speak more clearly without exciting your indignation.

'I believe that I cannot appear to wish to deceive either God or man, however I may act with regard to the *conditio sine quâ non.* I behave to father R. as to an honest man, who professes to be anxious for my welfare. I shall become more fit to serve the world, and, as a Christian, a more perfect Christian. Benefactions must have some essential purpose; and I think that I have a right to explain his intention respecting me, according to my own ideas and conscience, and thus and not otherwise to enter on my station. Duties which exceed the dictates of reason, I do not consider as binding; and therefore do not suppose that I deceive the father by my *reservationes mentales*; I can defend them by the well known doctrines of the Jesuits. But God cannot be deceived by any man, unless we could judge of God from ourselves and *vice versâ.* Our instinct is the finger of the Almighty, the first sign of his working within us, the eternal and the universal call, which you and I, in spite of all resistance, must follow. This is the road open before us, and reason has been imparted to us by the Creator as a guide through it; duties, which flow from this principle, unite all men in one family. They formed before Moses the law and the prophets. The succeeding divine revelations receive their convincing power not from the

dead letter, but from divine influence, which I expect to obtain in quiet adoration, as many of the faithful have done This is the confession of my faith. It cannot be denied that certain other obligations, which occasion a division among men into many parties, are apt to make hypocrites (*ne quid gravius dicam*). I have, since I left the university, as you know, led an unblemished life (as far as man can say so); I have been faithful without selfish views; I have worked without wishing to appear to oblige others. God has given me life and success. I have preserved my conscience pure; and how do I violate it if some person, desirous of raising me in the world, obliges me to accommodate myself to him and his religious party, which, if not founded on divine revelation, does not militate against it? I believe that this will not be more a sin than when a professor at Wittenberg signs the *formulam concordiæ* without having read it, or intending to die in the belief of it. He does this in order to become a professor, and comforts himself with his mental reservations. My motives are nobler and less interested. What can a man do who is a comedian, a profession which he must condemn when he is advanced in years, but which, perhaps, he cannot quit, on account of obtaining his daily bread? I must suppose that I possess or shall acquire sufficient skill to act for a couple of years a ridiculous part.

'Hitherto I have not been fully aware what pursuits should occupy me at Rome; now I know them, and am full of anxiety to attend to them. My inclination, friendship, and gratitude, are at dreadful variance with each other. I often reject that for which I have longed, and then again seek what I reject. I am in great distress. The matter is gone too far. My friend, you have been absent, and I have been *without* a friend in whom I could have confided. What is to be done? *Jacta est alea.*'

Some of the succeeding letters are also full of expressions of anxiety and distress, and prove the unhappy state of the writer's mind.—It will be a lasting reflection on Count *Bunau*, who was perfectly convinced of *Winkleman*'s merits, and knew his situation, as well as on the Court of Dresden, that this extraordinary man was left almost unnoticed, and at the mercy of a few Italians; who took advantage of his ardent love of study and helpless situation, to obtain their private ends, and decorate themselves with his plumes. Their offer of a monthly salary of three or four ducats was more than he could obtain from any other quarter, and was considered and proved large enough to be loaded with conditions; which, notwithstanding his pliability in matters of faith, occasioned him many struggles and much uneasiness. It appears that not only the desire of seeing Rome, and cultivating his favourite studies, but also the decline of his health and the impossibility of obtaining repose from too great application, without agreeing to the proposals made to him, influenced his conduct.—'It is my

only

only misfortune,' says he, in one of his letters, 'that I see no means of gratifying my wishes, but by being for some time an hypocrite; and I will abandon myself to my fate: the best years of my life are past, my hair becomes grey, and the dregs of my life do not deserve much consideration.'

The letters from Rome breathe a much more chearful spirit than those which were written in Saxony. Renovated health, the serenity of the Italian sky, a flattering reception at Rome, the pleasure of dwelling among the revered monuments of antiquity, and the consciousness of his superiority, which increased in proportion as he found opportunities of comparing the opinions of his contemporaries respecting the arts with the specimens which he had now constantly before his eyes, dispersed the gloom that had long been hanging over his mind; and having now acquired self-confidence, he was constantly engaged in some new literary plan, from the execution of which he promised himself a rich harvest of applause and renown.

We have already observed that these letters throw no new light on literature and the arts. We meet with few interesting remarks on the men with whom the abbé was connected, or the state of the study of antiquities among the Italians: but those who find pleasure in seeing a faithful picture of a great man's mind, and in tracing the first glimpse of light which shortly afterward became brilliant, will consider them as valuable additions to the other letters that have been published. His decided aversion from the French breaks forth in very strong and harsh terms: 'A Frenchman is incorrigible; he and antiquity are downright opposites.' 'All Frenchmen here are exposed to ridicule as a wretched nation; and I can boast that I have no intercourse with any of that most contemptible race of bipeds. Their academy is a society of fools, for whom a young Roman designed a proper coat of arms, viz. two asses scratching one another, because asses are pleased with any thing. If you should go to Paris, I shall not write a line to you.—A Frenchman, such as that nation now is, is unfit to become a great artist or a sound scholar: no Frenchman can speak a foreign language without exciting laughter: nor can any one be an honest man.'

He speaks with peculiar fondness of his History of the Arts, and of the impression which he hoped that work would make on the public. His sanguine expectations are poured forth in the following passage:

'It has always been my intention, and it is so still, to furnish such a work as the German language has never yet produced on any subject, in order to shew to foreigners what can be done. At least I do

not know many books in which so many important subjects have been treated in a style worthy of them. I am full of impatience, when I think that you will perhaps read it with delight.—The handsome *Belli* said, when he appeared for the first time on the stage in Rome: "The Romans shall learn what beauty is and can effect!" I wish that the world may learn from my book how one ought to think and write, in order to be worthy of one's self and of posterity. Under this idea, I shall compose the dedication to the hereditary prince (of Saxony), in such a manner that princes shall learn that not we but they ought to deem it an honour to see their names at the head of such a work. It will not be without errors, because much must be built on conjecture, but even against these it will not be possible to produce important objections.'

It appears that *Winkelman* felt himself, on the whole, happy in the contemplation of his situation in Rome, in the attention paid to him by cardinals and princes, in the honours heaped on him by learned societies of different countries, and in the independence which he had acquired. The last letter in the present collection is dated Rome July 1st 1767, and communicates to his friend his intention of undertaking, in the succeeding year, the journey that led to the melancholy catastrophe, of which every man of feeling thinks with horror and every admirer of *Winkelman* with regret.

The second part of the work before us, *Sketch of a History of the Arts during the 18th Century*, is introduced by the subsequent remarks, which will explain the plan and views of the author:

'A history of the arts, if it be more than a dry list of artists and works of art, if it be intended to judge, to estimate, and to explain, does not easily escape the influence of prevailing sentiments, for even the most candid historian and critic can only partially rise above general opinions and notions of taste. Hence the critical labours of some authors in other respects highly valuable, as *Vasari*, *Malvasia*, *Pascoli*, and even *Bellori*, are antiquated and become almost useless. —A critical history of the arts in modern times, on modern principles, would therefore be very useful in forming the judgment of the artist and the lover of the arts. That an attempt of this kind might not be wanting, the author undertook to treat that part which lies nearest to our times and to our interest. His views, however, do not extend to a general relation of the fate and the productions of the arts in all countries; he only wishes to make his readers acquainted with the best works that have been executed in Italy and particularly in Rome, as the centre and *rendezvous* of the best artists of all nations, and where even now more documents are collected than in any other place; for all statements, which are not merely historical, but refer to works of art, and contain criticisms, shall be founded on an actual view of them.'

We regret that the writer has thus confined his views, but we think that all who take an interest in the fate of the arts

arts will derive pleasure from the perusal of this sketch. It is not a dull chronicle, nor a dry list of painters and sculptors, but carefully traces every step of the arts, and exhibits their character in the different periods, together with the causes of their rise or fall. A long introduction contains a general view of the state of them in the 16th and 17th centuries, and represents in a very satisfactory manner their gradual decline, from the time of the three *Caracci* to the beginning of the 18th century. The important question ; *On what circumstances does the rise or decline of the arts depend?* could not be passed over unnoticed : but it obtruded itself so much the more since it is a striking circumstance that, during the 14th and 15th centuries, they made a rapid progress, although political circumstances were highly unfavourable ; and that, since the beginning of the 16th century, even the greatest exertions of the most distinguished talents could not prevent them from deteriorating. The author considers this fact as entirely the result of the state of enthusiasm in religion ; and he thinks that, without this enthusiasm, the seeds of art have never been able to thrive and flourish. He regards the beauties of the mythological fictions of the Greeks as less active causes of the perfection which the arts attained among them, than their zeal in religion, and the national ambition of the several Grecian states ; and he supposes that nothing but a similar zeal, prevailing in the 13th, 14th, and 15th centuries, could have produced so splendid an era in the annals of the arts. When this elevating power relaxed, their progress was checked ; and eminent patrons could not compensate for the absence of that sanctity which was attached to the art by the subjects on which it had before been employed. 'No longer fully engaged in the free service of the altar, it was obliged to please the world and flatter its humours ; its objects became more numerous but also more common ; the decline of its dignity produced a desire of great dexterity ; the necessity of quickness of execution gave rise to manner ; and manner degraded the art to a spiritless mechanical trade.' Hence the author seems inclined to conclude that the arts must, at all times, expect their principal support from religion and religious enthusiasm ; and he asserts that, under the influence of the spiritual religion of christianity, which addresses itself to man as a moral being, unconcerned about external shape and beauty, the arts could never have risen, nor will ever rise, to that perfection which they had reached in the service of the antient popular religion ; the ideas of which were capable of being refined and improved by the beautiful representations of the artist.

We confess that we cannot agree with Baron GOETHE in making the arts almost entirely dependent on popular religion. They possess, in our opinion, a much wider range for the attainment of excellence; and we consider it by no means as a favourable circumstance, that they have so long been only the handmaids of religion: since their sudden decline, both in antient and modern times, seems to have been either occasioned or hastened by the unmerited but unavoidable odium which was thrown on them as the supposed ministers of superstition. That the external encouragements of the arts have been principally derived from the religious *culte* cannot be denied; and it is obvious that the artist chose religious subjects for his pencil or his chissel, not because they alone were worthy of his genius, but because they would gratify the taste of the public, and, being exhibited in a place of divine worship, would spread the fame of their author: but it seems injustice to the arts to suppose that they could not from other sources obtain subjects equally worthy of them; and it surely remains yet to be tried what they are able to perform without the fostering care of superstition, when properly encouraged for their own sake alone. Should it ever be as much an object of national ambition to decorate public buildings with the finest pieces of art, as it formerly was an object of religious ambition to possess them in churches and convents,—should the artist be no longer obliged to become the instrument of gratifying the personal vanity of individuals, but receive a proper reward for having contributed to national honour,—and should a pure taste direct his exertions,—he will not be at a loss for subjects worthy of his talents, but a large proportion of the extensive field of the human mind will be open to him.

The history of art, during the 18th century, is divided into two parts, each comprising 50 years, and treats of the different branches of the subject under these heads: Historical Painting, Landscape Painting, Subordinate Classes of Painting, Mosaic Sculpture, Engraving, Lythography, Literature of the Arts, and General Prospectus. The principal artists are enumerated, and their merits and influence are criticized. Plagiarism is the reproach which is cast on almost all the historical painters of the first half of the last century; and even *Carlo Maratti*, the great pupil of *Andrea Sacchi*, to whose taste and merits due praise is given, is not exempted from it. After *Maratti*'s death, in the year 1713, no Roman nor any Italian artist obtained celebrity at Rome, but the first rank was occupied by foreigners of different nations, till the sculptor *Canova* (who is now living at Rome,) redeemed in some measure the honour

of his country. Portrait-painting was never considered by the Italians as a separate branch of the art; and only in the north of Italy a few artists were invited to cultivate it, by the prospect of gain in the neighbouring countries. Landscape painting was likewise much neglected; and only some Flemish and French artists, principally *Manglard* and *Vernet*, distinguished themselves by beautiful rural and sea-pieces.—Mosaic found in the two *Christofanis*, the father and son, great promoters and skilful artists, whose works are now the ornament of the churches of Rome. To the account of these men, Baron GOETHE adds a short history of the Mosaic, and his opinion of the real value of this branch of the art. It reached its greatest perfection, when it was resolved to supply the place of the paintings in the church of St. Peter by Mosaics. The manufactory established on that occasion still continues, and possesses an almost incredible number of tints of colours. 'They amount (says the author) to 15000, each of which has again 50 gradations or shades from the darkest to the lightest, so that 750,000 tints are produced, each of which is mixed in exact and fixed proportion, and can be prepared as soon as it is wanted. Yet this immense number is scarcely sufficient to imitate every tint which the painter is able to mix.' The value of the Mosaic art has undoubtedly often been over-rated, in point both of beauty and of duration. Baron G. endeavours to counteract an excessive admiration of it, by shewing that the best productions of it express little more than the *Caput mortuum* of the design, the arrangement, and the taste of the author of the original; and that it is much less a wish of preserving the beautiful masterpieces of painting in a more durable substance, than the natural predilection for all that is striking, that requires great pains in the execution, and struggles against an obstinate material, which has given rise to and supported the Mosaic art; a predilection, which once led to useless exertions on Porphyry, and constantly occasions in common life an unpardonable waste of time.

We pass over the other chapters of this section, and merely extract the concluding paragraph, on the prevailing taste at the end of the first half of the last century:

'The state of the arts and of taste, as we have described it to have existed towards the close of the 17th century, had now undergone but little alteration, and their external appearance was still alike sickly: but the internal disposition was somewhat improved. For a considerable time, most artists continued to work in the style introduced by *C. Maratti*, but already founded by *A. Sacchi*; at last, however, another style began again to find friends. A calmer spirit was diffused from Rome, which was now more than ever the seat of

the arts (for at Florence and in the whole of Lombardy they must be considered as almost extinguished); the contest of excentricities began to subside; *Piazetta* confined himself to the borders; *Tiepolo* was out of Italy; *Corrado*'s reputation had never been very high; *Solimena* was dead, and even his best pupil, *Bonito*, who soon afterward acquired some distinction, was converted to more solid principles; *Raphael*'s works were studied more carefully than before; and thus the germ of a better taste began to expand itself in secret.'

In the second half of the 18th century, Rome could boast of *Mengs*; whose merits and demerits, both as an artist and a teacher of the arts, are here discussed at large. Poverty of invention, and a want of ease in the arrangement of his figures and of expression in his heads, are admitted as striking faults in that great artist: but the beauty of his contours raised him above all modern artists; and the system of plagiarism found in him a successful opponent. His influence was not so great as might have been expected; and Baron GOETHE accounts for this circumstance from neglect of theory in the instruction of his pupils, and the great severity with which he expected perfection from them. *Pompeius Battoni* is mentioned as next to *Mengs* in skill and fame: but the productions of Sir Joshua Reynolds, during his stay at Rome, between the years 1750 and 1752, are noticed in rather a slight manner. We suspect that natural partiality here biasses the writer's judgment; since it is well known that Sir Joshua differed considerably from *Mengs*, and was perhaps his most successful rival as a scientific artist. Baron G. also adopts the principles of his countryman, in giving a decided preference to *Raphael* over *Michael Angelo*; and he warns the young artist against an exclusive study of and predilection for the works of the latter, as liable to excite a love of the Gigantic and Monstrous. A considerable share of praise is bestowed on *Gawin Hamilton*, an Englishman, who died a few years since at Rome; and the present learned professor of painting at the Royal Academy is represented as the most successful of the modern followers of *Michael Angelo*; but unqualified approbation is not given to the works of this great artist, to whose pencil the graces have denied some of their best gifts.—*Angelica Kauffman* and *William Tischbein* for some time obtained general notice; till in the year 1786, the French painter *David* attracted all eyes to his picture of the Horatii, and reaped a rich harvest of applause. Some of his countrymen, partly his pupils, followed his example, and improved the taste of the French school. The Englishmen Turner and Flaxman—the Italians *Sabatelli*, *Camoccini*, and *Pietro Benvenuti*,—and the Germans *Nahl* and *Karslens*—have acquired a considerable name, and are brought before the tribunal of the historian.

From

From the conciseness of the other chapters, containing the history of sculpture, landscape-painting, and the inferior branches of the art, we perceive that little attention has been paid to those objects. Landscape painting alone forms an exception, since by *Philip Hackert* it is stated to have been raised to much dignity and perfection. The account of this painter, as well as that of *Canova*, will be found interesting.—In the last chapter, on Literature, &c. a tribute of respect is paid to the memory of the two successors of *Winkelman*, viz. *Reifenstein* and *Hirt*; a discussion on the merits of painting in wax is introduced; and notice is taken of the attempts (unsuccessful, as we apprehend) of *Fernou* to apply the abstract principles of the modern philosophy of Germany to the arts, in lectures given at Rome in the winter of 1795-6.—A predilection for all that is simple, great, and impressive, is among the principal characteristics of the period under review. *Leonardo da Vinci* became a favourite, and supplanted in some measure the *Caraccis* and *Guido*; and the earlier productions of *Raphael* were preferred to those of his later days, particularly to the Transfiguration. This painting finds in Baron GOETHE a warm defender.—The divisions in the political world, during the last decennium of the past century, were not without influence on the republic of the arts. In the year 1793, the murder of the ambassador *Basseville* obliged all Frenchmen to quit Rome, and German artists took the lead: but they were fettered by the spirit prevalent in their native country, and cannot boast of great services to the arts.

Before we conclude our account of this history, we shall present to our readers the author's opinion respecting the effect, which the removal of the best antient and modern works of genius, from Italy to France, may be expected to have on the study of the arts and on the general taste:

'We think (says he) that neither the good nor the bad consequences will be so great as partial judges may suppose. The art or the artist, which must depend solely on the fading rays of those great lights, will never shine; nor are the most perfect works of art alone capable of fixing a pure taste in any spot. The divine productions of antient Greek artists were preserved and united in Constantinople, even when barbarism ruled. Rome itself has witnessed times in which, notwithstanding the presence of the masterpieces of *Raphael* and the Antiques, *Bernini* was adored, and *Luca Giordano*, *Solimina*, *Pozzo*, and *Currado* were approved masters: a fact which shews that pure taste, and the genuine high spirit of the arts, are not confined to the neighbourhood of the finest examples; and it is, therefore, with regard to painting and the plastic art, a matter of indifference whether Paris or Rome possess the Laocoon, the Apollo, the Torso, the Transfiguration, &c. The study of antiquities, on the contrary, may and will receive a check from the late removals.'

Our

Our readers must perceive that we attach considerable value to the history, which we have now introduced to their attention. When we consider that it is, as far as we know, the first attempt towards a continuation of *Winkelman*'s famous production, and that many difficulties obstruct its execution, we are glad to see so much effected, and that the work fell into such able hands. It has excited in our minds the strongest wish that something more may shortly be accomplished. A history of the arts in Rome is not now a history of the arts in general, nor can it afford a sufficiently correct criterion, by which our judgment respecting the state of them in Europe may be safely guided; because Rome is no longer exclusively the abode of great artists, nor does it present much greater encouragements to them than many other cities. We hope, therefore, to see the defects of the history before us, which arise from its confined point of view, speedily supplied by men of different countries, equally impartial and competent with Baron GOETHE; whose many judicious exertions for the encouragement of art on the continent are worthy of more auspicious times and circumstances. The qualities necessary to form an unbiassed historian of the arts, and of their modern progress in particular, are indeed many, and but seldom unite in one man. He ought not to be an artist by profession, yet initiated into all the mysteries of the arts; he must be a complete scholar, yet a man who knows the world and the human mind as well as his books; a poet, and yet a cool judge; perfectly acquainted with the opinions of others, yet capable of seeing with his own eyes, and divesting himself of prevailing taste. Only by partial attempts on separate branches of the arts, in different countries, can a general history be prepared; and nothing is more likely to excite emulation and lead to improvement, than such a guide as a good history of the arts in modern times must become, which cautions the aspiring student against the influence of dazzling popular applause. Let us, then, have the satisfaction of beholding this cause promoted by a history of the arts in Great Britain. To this country they must, under present circumstances, look for liberal support; for even Baron G.'s soft colouring, in his picture of the state of the arts on the continent at the close of the last century, is by no means flattering to our hopes; and the changes which have taken place, since the present century began, throw a gloomy cloud over the future prospect.

Part III. of this work is intitled, *Traits for a picture of Winkelman*, and contains three separate papers composed by three friends, which the editor proposed to consolidate into one: but, having been prevented from executing this design, he now gives them to the public in their original state. Purposely, *Winkelman*'s

kelman's influence on the arts had been but slightly noticed in the preceding history; and these papers are intended to supply the defect. The first, and by far the most valuable, depicts the object of the writer's contemplation in all his different relations, dispositions, and peculiarities. A philosophical spirit pervades the whole; and not only an interesting acquaintance with *Winkelman* himself, but also with many of his contemporaries, rewards the reader for the perusal.—The second paper, which proceeds, as we suppose, from the editor's own pen, discusses the abbé's influence and merits with regard to the arts, and the study of antiquities. The third shews how he became what he was, and was enabled to effect what he accomplished. They are amusing and instructive, but occasionally manifest too great a desire of purifying the character of their hero from every spot, and smoothing every asperity.

At the end of the volume, we find a list of all the letters of *Winkelman* that have been published, in chronological order.

Schwabe. 1st Art.

ART. XVII. *L'Ami des Cultivateurs*, &c. *i. e.* The Farmer's Friend, or plain and easy Rules addressed to all Proprietors of Land, Farmers, Labourers, Vine-dressers, &c. for obtaining the best Crops of every Kind; with all requisite Information for the Management of Live Stock, Poultry, Corn, Wine, Hay, Woods, Ponds, and other useful Articles, and for converting to beneficial Purposes every Part of an Estate; with Directions for the Cure of the Diseases of Cattle, and for superintending Bees and Silk worms. With copper plate Engravings. By P. G POINSOT. 8vo. 2 Vols. Paris. 1806. Imported by De Boffe. Price 18s.

ACCORDING to the accounts presented to us in these volumes, farming has not experienced extensive improvements in France; and if enlightened English agriculturists were to peruse the lectures of this instructor, they would not very highly estimate his knowlege. We do not mean to insinuate that M. POINSOT is ignorant; for, compared with his countrymen, he is probably well informed, and has given them directions of which they are much in want: but if we contrast his practice of farming, as far as the comparison will hold, with that which is prosecuted in this island, it will appear in many instances bungling and defective. Praise is due to him for his forcible recommendation of method, neatness, and humanity, in the management and superintendence of all the animals belonging to a farm; and he seems to have been particularly solicitous to furnish the cultivator with directions for preventing and curing the maladies to which live stock are subject.

Farming

Farming is a term of more extensive import, and including a greater variety of articles of culture, in France than in England. Vineyards, mulberry-trees (as food for silk-worms), and olive-trees, are not objects of British culture; and therefore directions respecting their management are rather matters of curiosity than of use to agricultural readers on this side of the channel. Difference of climate will require a difference of process in the treatment of the same vegetables: so that we cannot advise English farmers to follow M. POINSOT's rules, even when he treats of those articles with the culture of which they are familiar. If they turn to his plates, exhibiting the farming instruments which he recommends, they will perceive that the ploughs, harrows, barrows, &c. (he gives no designs for waggons and carts) are very inferior to those in common use among us. Only one kind of plough is represented, which seems to be an aukward and clumsy tool; and none of those instruments which we have invented for cleaning land, and for facilitating the operations of husbandry, are presented to notice. Even the rakes, prongs, spades, and sieves, are unequal to those which we employ.

The work, divided into fourteen parts, treats of farm-houses and buildings necessary for the farm-yard; of the instruments and tools of agriculture; of cattle belonging to a farm, and of the process of making butter and cheese; of all kinds of poultry; of the method of raising and managing bees; of the different sorts of soil, and of manures; of labour and various kinds of culture; of grain and other produce applied to the support of man, and of domestic animals; of the methods of sowing, harvesting, and preserving them, &c.; of the plants which produce flax and oil, and which are valuable for their root or bulb; of natural and artificial meadows, and of hay-making; of the culture of vines, and of making wines, brandy, vinegar, cider, and perry; of the culture of olive, walnut, chesnut, and beech trees, and of the method of making olive oil; of woods, forests, coppices, and hedges; and of lakes, ponds, and marshy land.

In the first volume, the author confines himself to the business of the farm-house, farm-yard, and home-stead; and in the second he details the various labours of the field. We cannot follow him through the multifarious contents of his several chapters, because we should swell this article to a magnitude far surpassing its importance, especially to English readers. Our duty will be discharged by a more cursory notice.

As the formation of a good cellar is a material object in the farm-houses through a great part of France, particular directions

tions are given for this purpose in the first chapter. In the stable, M. Poinsot advises the windows to be made with oiled paper or linen, 'because glass windows *fatigue* the eyes of horses;' and he prefers boarded to paved bottoms, because the latter '*fatigue* the horses' feet, and are not so easily kept clean as boards.' If, however, he approves of a parlour floor for horses, he recommends stone where we employ wood, viz. for the construction of the manger; which, we are told, should be supported by a wall built strait up from the bottom, with no space left under the manger for litter to be turned up under it: this being condemned as a very bad practice, 'because the smell of it is unpleasant to horses, often making them refuse their food.'

Though the hog is not a very cleanly creature, this author makes interest for him to obtain a dry and comfortable stye, and endeavours to raise his consequence by representing him as an animal of the first importance. The hen-house is directed to be placed over the hog-styes: but in winter a warm chamber is ordered to be provided for the accommodation of early-laying pullets, over the oven in the bake-house.

Beasts of labour find a friend in M. Poinsot. He charges the agriculturist, on a principle of self-interest, to regard his working cattle as his supports and friends; he bids him remember that the service which he will obtain from them must depend on the care which they receive, and that it is the very worst economy to overwork them. When he says that he has known people who have considered their team to be sufficiently strong when it consisted of only two or three asses, and that two-thirds of the French farmers are very deficient in their attentions to the food, lodging, labour, and diseases of their working cattle, we cannot help applauding his humane admonitions. He reprobates the barbarity of flogging and beating a team of lean and tired animals, who are unable to drag a plough after them, and points out the advantages of having cattle equal to their work.

The section on cows, and on the manner of feeding them and of employing their milk, contains many useful directions. 'It is the general opinion (the writer remarks) that if cows are fed plentifully, no matter with what, they will look well, and give a quantity of milk: but in consequence of the prevalence of this idea, many cows are destroyed, and many cultivators disappointed. Proper food, given regularly and moderately, is much more beneficial, and prevents many diseases. If the cows be kept in the house during the summer, they should be fed with a mixture of hay, straw, and grass, preferably to their living

living entirely on green meat, which might occasion serious maladies by its great fermentation in the stomach.'

From the details of the practice of the dairy, we find that the French do not skim off the cream, but pour the milk away from the cream, which is left behind in the pan. Must not our mode be preferable?—Particular directions are given in this part of the work for making the Swiss cheese called *Gruyère*, together with that of *Brie*, and cream cheese.

Under the article sheep, the *Mérino* race are not forgotten, but are said to be managed with great success in various parts of France, particularly at Rambouillet and in the vicinity of Geneva; and they are recommended to the general notice of farmers, on account of some excellent qualities in them, in addition to the superior value of their wool.

'1. The *Mérinos* can support themselves on all kinds of pasture lands, even on those which are hurtful to sheep in general; as for instance on wet meadows, which occasion the disease called the *rot*. They eat indifferently all kinds of grass, and can keep themselves on the edges of the roads.

'2. They answer well in the fold.

'3. They keep their teeth, and live to a great age.

'4. They succeed in almost all climates as well as in Spain; this fact has been established by the experiments which have been made with them in different parts of France, in Holland, Poland, Denmark, &c.

'5. They fatten easily, and their flesh is excellent.'

In the part which treats of the poultry-court, we find a receipt for making a *verminiere*, or place for breeding worms, on which chickens delight to feed; and which will support them, we are informed, through the summer, with the addition of a very little grain. The process of making and fattening capons and poullards, for which the French are so celebrated, is here fully displayed. A recipe is given for preserving eggs, which simply directs to oil the shells, and to pack them in bran. Turkeys, geese, ducks, pigeons, and even pheasants, are noticed in distinct sections. Of pigeons, fourteen varieties are enumerated.

Bees occupy a considerable share of M. Poinsot's attention. The form of their hives, some of which are ordered to be of a barrel shape, and to rest on their sides; the construction of their apiary, or bee-house; the method of taking their honey; the attention which they require at different seasons; their pasturage; and the method of extracting honey from the comb, and of preparing the wax; are very minutely specified: but no notice is taken of the rich beverage called *mead*, which we obtain from honey.

Though

Though the chapter on silk-worms little concerns us, it will not be amiss to transcribe the introduction, in order to shew with what earnestness the author recommends this branch of French husbandry to his countrymen:

'No farmer, who has white mulberry trees within his reach, and does not employ them in raising silk-worms, can be said to consult his interest; because considerable advantage may be obtained from them at little expence and trouble. I knew a country vicar, whose ecclesiastical income was too small for his support, but who, having a plantation of mulberry trees in his parish, gained from them 1800 livres in the space of two months only, by raising silk-worms, notwithstanding that the situation was not favourable.'

At the end of the chapter on manures, the reader is presented with a sketch of the history of *Kliyoog*, called the *Rustic Socrates*, who was celebrated in Swisserland for his methods of improving land. *Kliyoog*, who is here represented as a phænomenon, was no more than what we in England should call a prudent and attentive farmer. He carefully collected his manure, and judiciously managed it; he improved strong land by carting ashes and light soil on it; he practised irrigation and under-draining; and he kept his fields free from weeds. By such *witchcraft*, he procured large crops, and acquired in addition the reputation of eminent wisdom.

To wheat, rye, barley, oats, buck-wheat, and pulse, the grain usually cultivated in England, the French farmer adds maise, millet, rice, lentiles, lupins, and French beans. In the part of the work which treats of flax, we have a chapter on the culture of the great nettle; and after an account of lucerne, clover, sainfoin, (or as it is called in Swisserland and Dauphiny, *esparcette*), and ray-grass, we find the pimpernell recommended for a crop on sandy soils. This plant, we believe, is not an object of culture in our island.

For the cultivation of vines and olive trees, and for making wines and extracting olive oil, particular directions are afforded; and a catalogue is given of the different trees and shrubs which demand the notice of the planter: but we must pass over all these particulars, as well as the observations in the last chapter respecting inland fisheries.

The author concludes with urging the importance of a minute and unremitting attention in the cultivator to the various objects of his care; and with assuring him that he must "rise early, sit up late, and eat the bread of carefulness," if he wishes to derive profit from the pursuits of agriculture.

Mo-y.

ART. XVIII. *De l'Impossibilité du Système Astronomique de Copernic et de Newton*, &c. *i. e.* On the Impossibility of the Astronomical System of Copernicus and Newton. By L. L. MERCIER, Member of the National Institute. 8vo. pp. 318. Paris. 1806. Imported by De Boffe. Price 7s.

IF this be not a skilfully conducted attack against the Newtonian System, it is the most *violent* perhaps that has ever been made. The author unsheaths his sword, and throws away the scabbard: he unfurls the bloody flag, and, before the victory is atchieved, he triumphs in the death of Newton's renown.—We wish, however, that he had been either more reasonable or more absurd: in the latter case, if he had failed of convincing, he might still have amused us. He has, indeed, made some tolerable attempts towards the production of the latter effect: 'The mystical Newton (*le mistificateur Newton*) shall not obtain,' he says, 'the lasting fame of a Homer: if the Sun under his cloak of glory be nothing else than a large coal, the throne on which that geometer is seated cracks and totters: a Pigmy David has cast from his sling a stone into the proud forehead of that Goliah. The whole scaffolding of his system is placed only on an abstraction,' &c.

A little farther on, he informs us that it was *Voltaire* who brought into France two new names, and two bad *trickeries*, (*presteges*), the doctrine of Locke and the attraction of Newton. 'Locke,' he says, 'is by far the very worst metaphysician with whom I am acquainted, if he indeed at all merits that title,' &c.

In the body of the volume, we see nothing that deserves serious notice. The author raves and declaims quite *à la Françoise*: he takes up an old exploded notion concerning the materialism of attraction, for the purpose of assault; and he derives strong arguments of refutation from the disagreement of Astronomers: for instance, they are not all agreed concerning the exact obliquity of the ecliptic. Is the ecliptic, then, not inclined to the equator? He argues, again, on the supposition that Astronomers have said that the obliquity of the ecliptic will continue to decrease, till the ecliptic agrees with the equator: now the best Astronomers do not assert this.—Other things are similar.

Two copies of this work are lodged in the Imperial Library, but we will run the risque of its becoming scarce, and our copy is very much at any gentleman's service for seven shillings.

R.W.

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